VOL. CCXX, No. 2872
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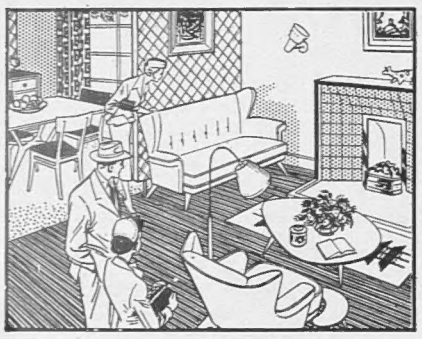

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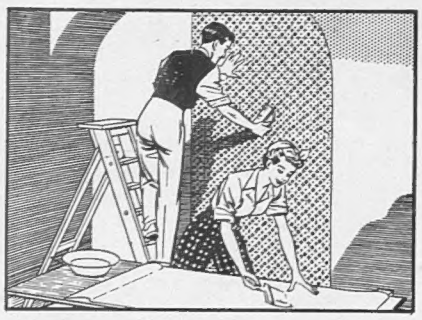

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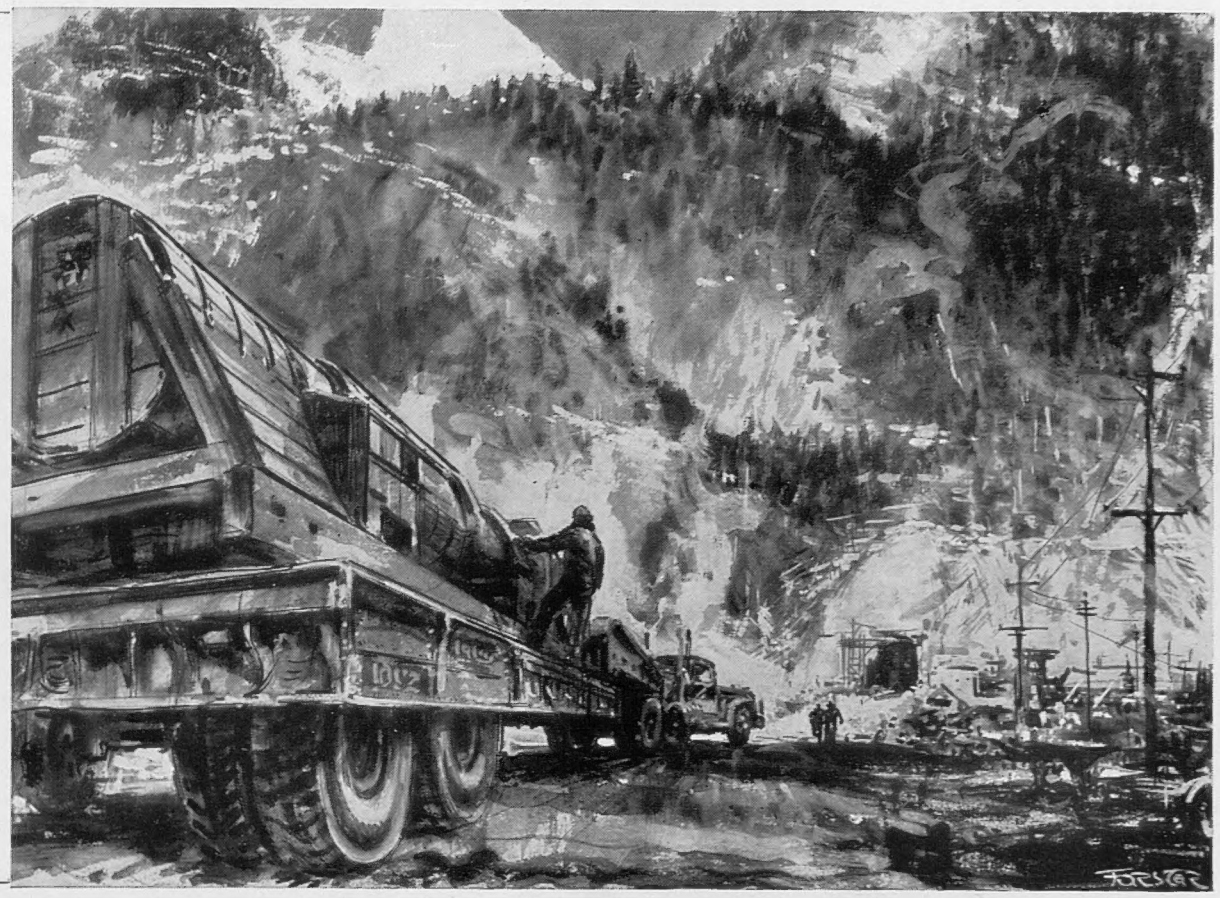

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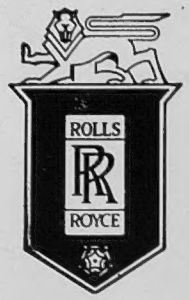

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AERO ENGINES

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Rolls-Royce built the first propeller turbine aero engine to fly.

Volume CCXX No. 2872

The SPHERE, London, February 26, 1955

The SPHERE

with which is incorporated THE GRAPHIC

AN UNUSUAL FORM OF WELCOME FOR PRINCESS MARGARET IN THE CARIBBEAN—GREETINGS FROM A FLOATING "ISLAND" AT ANTIGUA, IN THE LEEWARD ISLANDS: This "island," constructed on a raft, is complete with hut (surmounted by the Union flag), palm trees and a calypso band. It was in a prominent position off-shore as the Princess travelled in the Royal barge from H.M.Y. *Britannia* to the landing-stage for her arrival on the island during her West Indian tour.

On almost every occasion as the Royal yacht *Britannia* has entered the harbours of the Caribbean islands, islanders have gone out in small craft to welcome Princess Margaret to their shores. At Antigua, seat of Government in the Leeward Islands, several members of the local population had a different idea. They constructed a replica island on a raft and anchored it in a prominent position off-shore between the *Britannia* and the dock. With the help of a calypso band, they provided an unusual form of welcome as the Princess went ashore to be greeted by the Governor, Sir Kenneth Blackburne, and other officials. Soon after her arrival in St. John's, the capital, the Princess went to the Savannah, a recreation ground surrounded by trees, to attend a public reception and a rally of some 6,000 schoolchildren. The occasion was made a public holiday, and as many people as possible crowded into the grandstands. At the end of the rally, during which the Princess had made a tour of the ground in a car, the children sang a song entitled "Sweet Princess of our Sovereign Isle." Princess Margaret also made a tour of Antigua and visited English Harbour, which during the eighteenth and nineteenth centuries was a base for Britain's Navy in the Caribbean. (Pictures of Princess Margaret's stay in Barbados appear on page 343.)

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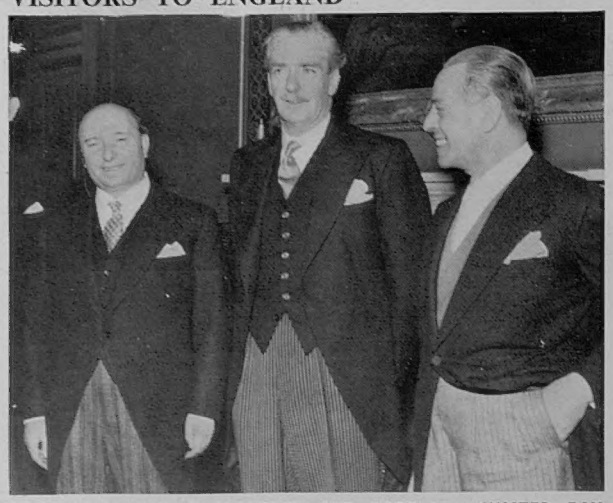
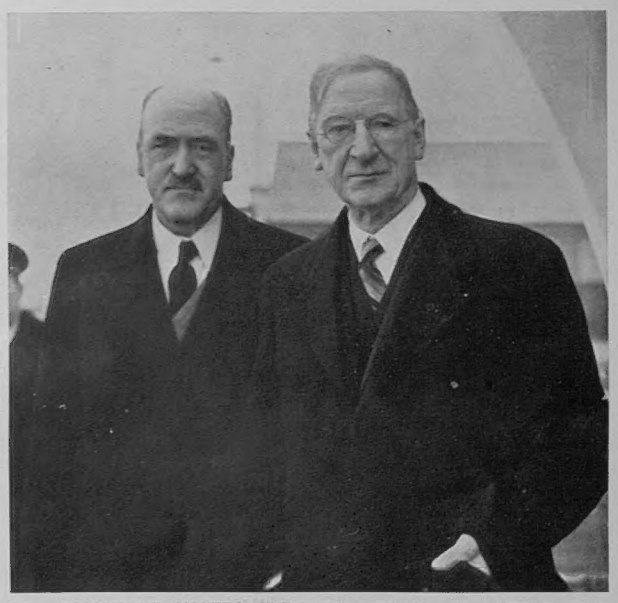
VISITORS TO ENGLAND



THE ITALIAN PRIME MINISTER AND FOREIGN MINISTER PAY AN OFFICIAL VISIT TO ENGLAND: Signor Mario Scelba (left) and Professor Gaetano Martino are seen with Sir Anthony Eden when they met for talks at the Foreign Office in London. Although they were paying a courtesy visit, discussions were held on the subjects of Anglo-Italian trade, Western European Union and relations with Russia. During their stay in London the Italians were received by the Queen at Buckingham Palace and were met by Sir Winston Churchill.

LADY EDEN MEETS THE WIVES OF THE ITALIAN STATESMEN: The wife of Britain's Foreign Secretary entertains Signora Scelba (left) and Signora Martino at a luncheon party. Wives of several British statesmen were also present.



MR. EAMON DE VALERA FLIES TO LONDON TO ATTEND THE FUNERAL OF MR. JOHN DULANTY, A FORMER IRISH AMBASSADOR IN LONDON: The former Premier of Eire is seen with Mr. Frank Aiken, former Eire Minister for External Affairs, after their arrival from Dublin. They attended the Solemn Requiem Mass for Mr. Dulanty which was celebrated in Westminster Cathedral last week. Representatives of the Queen, the British Government, and of the Irish Government were also present. Mr. Dulanty was High Commissioner in London from 1930 to July 1950, and first Ambassador for the Republic of Ireland until September 1950. He was born in Manchester in 1883, and the Irish Free State Government appointed him Commissioner for Trade in Great Britain in 1926.

RATES OF SUBSCRIPTION TO "THE SPHERE"

Orders for subscription to THE SPHERE *should be handed to any bookstall or newsagent, or addressed to the Subscription Department,* THE SPHERE, *Ingram House, 195-198, Strand, London, W.C.2. The rates for 12 months, including Christmas Number, for Great Britain and Eire, are £5 16s. 6d.; 6 months and Christmas Number, £3; 6 months without Christmas Number, £2 16s. 6d. For Canada the rates for the same periods are £5 14s., £2 19s. and £2 15s.; and for elsewhere Overseas £5 18s. 6d., £3 1s. 3d. and £2 17s. 6d. Terms include postage.*

A London Newsletter

195–198, STRAND, W.C.2.

Nuclear Power.—Lord Jowitt perhaps did not exaggerate when he commented on Lord Salisbury's announcement of the plan for nuclear power-stations as "perhaps the most significant ever made in that House in its long history." Many of us will not live to see the full fruition of this costly scheme, a gamble in futures justified by progress in research. It will be ten years before the plans will be so far advanced as to affect the output of coal, and longer still before nuclear power replaces coal as the chief source of power and provides us with much cheaper electricity. Knowing nothing of the subject, I will comment only on a side issue. The White Paper speaks of siting (when siting comes up) the new stations as far as possible from the areas of large population, not because they might accidentally become lethal but to mitigate public anxiety. I wonder if that decision is either just or necessary. The people who will benefit most from the new juice are to be spared "anxiety." It is to be borne by the rural minorities. But the anxiety is a figment of imagination. The piles are inherently safe and "could not blow up." If they did . . . ? My eye fell on a parallel news item in my morning paper. The Bikini H. bomb contaminated 7,000 square miles with deadly radio-activity. That item suggests that the centre of London or Birmingham would be as "safe" a site for a pile as the Cumberland moors or Dartmoor. Meanwhile, the coalminers need not fear for their employment. On the other hand, the young entry to the pits may perhaps well wonder whether a miner's life will be a vital and a favoured industry in 1984, and all that. It was only the other day that a pundit reminded us that our economy, like our island, was founded on coal. Significant indeed!

Russia's Latest.—I suppose it is natural for us common people, on matters which gravely concern our fate as a nation, our very existence as men, the future of our children and race, to take a lively interest, and express strong and determined views, even on policies and matters of which we can know very little. I hear in my bus or train, and I can excuse, the views expressed: Are we always to wait on America's O.K.? Has the U.S. in past decades always shown its pre-eminence in diplomacy? Are we always to be hamstrung in every effort to break down the Cold War by backing up old Chiang, who spits defiance and threats of aggression behind his American umbrella, and was not so very long ago dismissed even by us as a daddy-do-little? Haven't we any mind of our own, any relic remaining of our former influence and initiative? Must we be pushed over the final crater-edge at the word of that "Foreign Office spokesman" who detects in every Russian proposal a palpable attempt to drive a wedge into Western solidarity; a clumsy and obvious propaganda device? And if it is, why turn it down? A meeting between a few delegates in India costs less than an hour of rearmament; certainly it need not cost us the friendship of the U.S., which needs us as much as vice versa. It might even relieve tension and open an avenue. At least it would help to shake the Russian view that nothing the Kremlin suggests can be accepted as other than a clumsy device to trick and divide us. Some of these ignorant grouses are excusable. Nor need it mean the abandonment of Chiang, let alone of Formosa. *All* nations concerned in current problems do not attend *all ad hoc* conferences. Ah! But we don't know what lies hid behind the Curtain. But does the F.O. spokesman, that frightened official? Or Ike or Eden? If they do, why does their knowledge languish and atrophy? Why have we come to regard our own country and Government as growing diplomatically and politically without form and void, a servile satellite of one Great Power? All these notes of interrogation are answered by our ignorance. The truth lies at the bottom of the well and it is very muddy. Somewhere, someone with a shrimping-net is dredging. We must wait and see and arm and be taxed.

Zhukov and Ike.—I have said often enough that the personal ambitions and hates of individuals have played a terrible part in the miseries of blood-baths from which nations and all humanity have suffered and continue to suffer. Nations, like sheep, have followed or been driven by their leaders to the altar of sacrifice, not for their own sins, not by their own wills, but to achieve personal and individual ambitions or personal vengeance. It is more than a theory. And, if it be true, the converse may be true. If the leader of one country has a personal respect or affection for the leader of another, by so much is the danger of involving millions in two countries in death and torture reduced. Believing these things, I took comfort in the exchange of civilities between Eisenhower and Zhukov when the latter's appointment as Minister of Defence was announced. I noted that years ago, when both were fighting soldiers and not statesmen, they gave each other (for what it was worth) something like a pledge that neither's country need (or would) attack the other in any foreseeable circumstances. If that pledge had any value then, its value must be enhanced to-day when each of them has much more power and authority in the movement of armies and in the unleashing of the dogs of war. And it is not easy to be sure that the relations between their two countries are any worse to-day than in 1945. In some ways they are better, the hard words exchanged between them are by no means more bitter than in 1945, the habit of and impulse to war are clearly reduced by the H. bomb and by cooler thinking about the futility of war and the barren prizes of victory. I think it a *good thing* that "Ike" and Zhukov liked each other once, worked together as allies, and still respect each other.

An Act of Grace?—Lord Douglas has reluctantly exercised his prerogative and by an act of grace has taken back Peters, the dismissed shop steward, into B.E.A. employment. "An act of grace" is a pleasant-sounding phrase. An act of expediency or surrender is not so pretty. Yet no last-minute discovery of facts established that Peters had been unfairly used or that his breaches of faith and conduct were indeed less reprehensible and less deserving of the penalty he received. A strike is a deplorable event in any trade and should be averted by any honourable and constitutional means. To buy off the threats of a strike by surrender is not one of those means. Nor is it the wisest form of conciliation. This we know by bitter experience, and the T.U.s who sometimes adopt the same practice, know it also. If both sides in an industrial dispute stuck to their pledged words, were true to themselves and their elected representatives, and thought in terms of country as well as of backyard, there would be no strikes, for there would be no grievances which existing conciliation machinery could not adjust. But conciliation is to-day an elastic word which embraces surrender of nobler things than "face." It embraces surrender of conscience, of courage, of common sense in the long view. We affect to condemn appeasement in our dealings with the big dictator, we grovel before the small. Yet the folly and futility, the encouragement to further aggression, which we detect and brand in truckling to the big, we overlook, or turn our eyes from, in our settlements with the small dictators. Yet folly and futility are clearly common to both. What are acts of grace (or shrewd expediency) in our relations with the small fry are acts of madness in dealing with Hitlers.

WITNESSES OF THE SOVIET CRISIS

THE ARRIVAL IN LONDON OF AMERICAN NEWSPAPERMEN WHO HAD INTERVIEWED SOME OF THE KREMLIN LEADERS: They were greeted at London Airport by Mr. J. Lee, the London editor of the International News Service, who is holding a newspaper which had printed one of their reports. From left, the interviewers of the Communist rulers are—Mr. J. Kingsbury Smith; Mr. W. R. Hearst, the owner of a group of U.S. newspapers; and Mr. Frank Coniff. They had been in Moscow during the recent changes in the Soviet Government. They had talked with M. Molotov, M. Khrushchev, Marshal Zhukov, Marshal Bulganin and Stalin's daughter, Svetlana. Their interviews were widely read in Britain. Little which was new in Communist policy was imparted to the questioners. But the assurance with which Marshal Zhukov, the new Defence Minister, conducted himself towards them may be significant.

The Death Penalty.—On the whole I feel relieved that the question of suspension of the death penalty will not again be passed to the Upper House. This difficult and contentious question

unlikely now to be raised again for a decade, unless some burning doubt is within that time raised in the public mind. The decision was free and the speeches for the Amendment were unexpectedly restrained and open-minded. It was difficult to resist the arguments of the Home Secretary against a trial-period suspension; for reimposition after five years would prove impossible whatever "consequences," after so short a trial, might be drawn from it. Murder is still rife. Ruthless killers are still abroad in a land still under the influence of war and its barbarities and its disregard of the sanctity of human life, and I very much doubt whether in the past few decades (the Evans case notwithstanding) any man or woman has suffered death by hanging which he or she did not morally deserve. That is not perhaps precisely what our criminal justice is devised to ensure. It is amazingly fair, partial to the criminal, and often enough a man with the blackest record has come to court with "unblemished reputation" (so far as the jury know), and been acquitted because there was not quite that reasonable certainty to justify the appropriate verdict on the indictment with which he was charged. And if he be convicted at Assizes, the safeguards against wrongful execution, on the evidence or on a point of law, are now almost infallible, with the Court of Criminal Appeal and beyond it a final tribunal in certain circumstances, and beyond that the Home Secretary's exhaustive review, with all the aid given by Law officers and the Assize judge. No suspected murderer, who can proffer a scintilla of doubt, on a point of law or evidence, can be hanged to-day except after what are virtually five trials, from the magistrates who commit, to the Home Secretary, who makes the final review.

Fouling the Sea, Too.—Mr. Callaghan was far from exaggeration when he launched a campaign for the total abolition of discharge of oil into the sea. In my limited experience of our South Coast, it is an understatement to say that within our lifetime, unless "something is done," these beaches will be unusable. They are unusable now, except by millionaires to whom new clothes are a flea-bite or by holiday-makers and residents clad in well-worn and stained boiler-suits. On some of our beaches between Essex and Dorset, it is impossible to sit down anywhere without registering a permanent record on the seat of a skirt or trousers. The "progress of science" is fast robbing us of the amenities, the beauty, the peace and the charm of Nature, and science, which could alleviate, does not pause to mop-up in its triumphant advance. Oil need not be discharged in the seas. It can be separated, retained, even re-used. It could be discharged in ports. I thought *we* had taken measures of a limited kind to forbid it. But of what use are measures whose breach is not heavily punished or, indeed, measures taken by one seaboard nation and scouted by the rest? It is not humanity which makes the nations act as one. At long last, they may co-operate in a reform which touches their pockets. I should have thought by now the value of the tourist traffic to the nations which border the seas round Britain might have induced that co-operation, not from humanity to birds or men, but for the safeguarding of a valuable source of revenue.

Parochial Weather.—It is quite true that we have laughed at the B.B.C. weather reports for a long time. The experience of their falsity and ineptitude in relation to the area in which we are included makes us regard the official weather wizards as an extravagance. They were certainly more accurate under Air-met conditions, but I hesitate to shoot these modern mathematicians, who no doubt are doing their best. But their areas are indeed far too big, and that is why the local amateurs, with centuries of experience of local conditions, do so much better as prophets. I still keep a rain register, and twenty years' experience enables me to be certain that villages four miles from Petersfield will, for geographical reasons, have far less rain than that town. For twenty years my neighbour, 120 ft. lower than me in the same parish, has averaged a consistent and noticeably lower annual rainfall than I have. The rainfall on the West Sussex coast towns is remarkably less than that of towns and villages a few miles inland. Kew and Oxford are meteorologically thrice sixty miles apart. These are details of which, of course, no national weather bureau can take note, but there is a strong case for reducing the areas covered (except for the boredom of listening to a still longer recital of prophecies). I happen to live in an area which *may* be East or *may* be Western England. I think the wizards might risk defining that area as one thing or t'other. We always give them the benefit of the doubt, and judge that we belong to the west when western prophecy is fulfilled in our area, and vice versa. For that reason, we are not best able to judge their prowess. They provide themselves with a loophole, like more famous oracles.

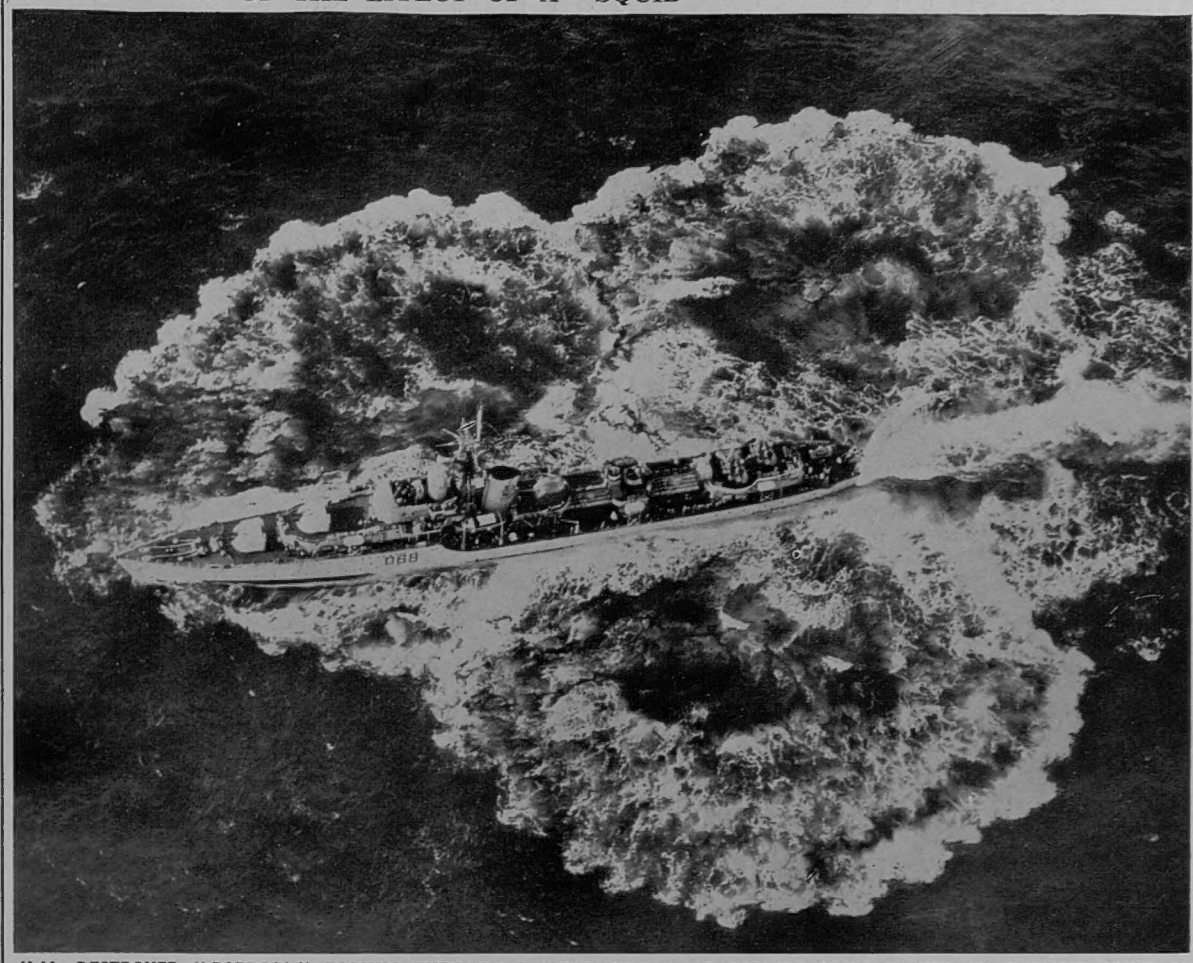
THE OLD STAGER

IN NEXT WEEK'S ISSUE

THE R.A.F. TO-DAY

Article by Air-Marshal Sir Robert Saundby, K.B.E.; Illustrated with Photographs and Special Drawings by Cavendish Morton

IN THE WAKE OF THE EFFECT OF A "SQUID"



H.M. DESTROYER "BARROSA" PASSING THROUGH A "SHAMROCK" OF BOILING FOAM CAUSED BY THE EXPLOSION OF HER ANTI-SUBMARINE DEPTH-CHARGES: The *Barrosa's* anti-submarine weapon, known as the "Squid," flings its missiles ahead of the ship, a method of attack which has outdated the wartime method of dropping depth-charges astern of a ship. This picture was taken during an exercise in the Mediterranean as the 2,380-ton "Battle"-class destroyer steamed through the pattern which her exploding charges had made a few moments earlier.

The "Squid" has been in existence since the end of the war but news of it was not released from the Admiralty's secret list until 1952. This weapon, which outdates depth-charge attack from astern, consists of a triple-barrelled mortar situated on the quarter-deck. The pattern of the depth-charges, which are fitted with fins, and which are fired from the mortar well ahead of the ship, is arranged to fall in the vicinity of a submerged submarine previously located by Asdic equipment. The charges can be sighted to explode at any depth.

Since the introduction of the "Squid," however, the Admiralty have developed an even better form of anti-submarine weapon, which has been named "Limbo." This is a three-barrelled mortar similar to the "Squid" but with a greater range of fire. The equipment includes greatly improved Asdic gear containing an electronic "brain" which, having located a submarine, aims, fires and sets its bombs to explode at the correct depth without human aid. Prototypes of this equipment were fitted in the first two post-war frigate conversions *Rocket* and *Relentless*.

THE CITY OF LONDON PLANS A WELCOME HOME TO PRINCESS MARGARET

A SPECIAL "URGENT AND IMPORTANT" MEETING OF THE COURT OF COMMON COUNCIL IS HELD AT GUILDHALL TO DISCUSS THE ARRANGEMENTS TO ENTERTAIN PRINCESS MARGARET AFTER HER TOUR OF THE CARIBBEAN: Presiding over the Court (in the absence of the Lord Mayor, Alderman Sir Seymour Howard) is Alderman Sir Frank Alexander. It was agreed unanimously that the Princess should be entertained to luncheon by the City Corporation at the Mansion House. The Chief Commoner, Mr. T. Kingsley Collett, said that the tour marked a great stage in the Princess's life and that she was fulfilling her mission with dignity and ability. It would be the City's privilege to mark their appreciation of a notable recruit to the ranks of our Ambassadors. The special meeting called by the Lord Mayor to discuss the arrangements for the reception was said to be "most unusual." After the meeting a protest was made about the secret summons.

THE FIRST U.S. ATOMIC TEST OF 1955

A "Nuclear Device" of New Design, Set Off Over the Proving-grounds in the Hills of Nevada, Produces a Relatively Small Explosion

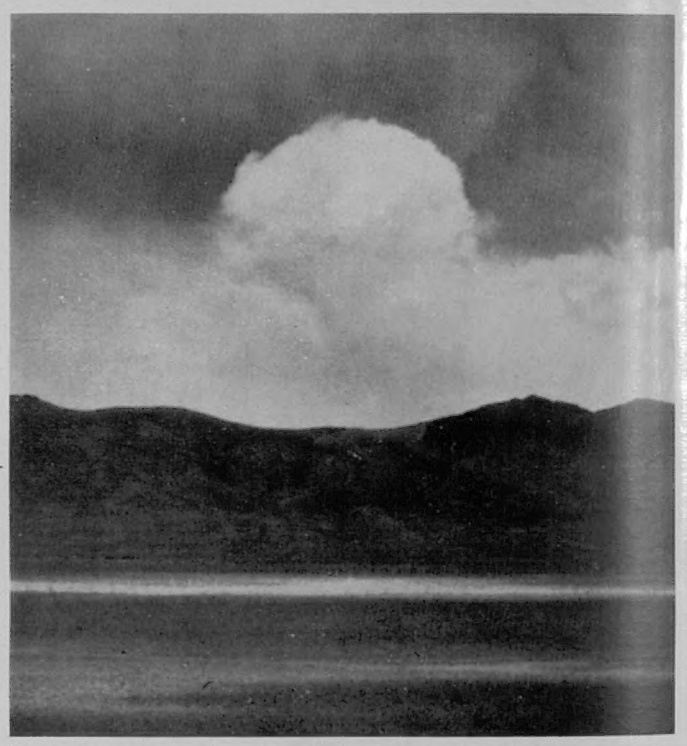
THE START OF THE 1955 SERIES OF NUCLEAR WEAPONS TESTS: Fifty-five miles from the camera the fireball bursts over the desert hills of Nevada in the U.S. The device, dropped from the air, produced only a comparatively small explosion. No noticeable shock was felt at Las Vegas, sixty miles away.

Some 1,100 military and civilian officials were the observers of a small atomic explosive test at the proving-grounds of the American Atomic Energy Commission in Nevada last week. It was the first nuclear trial in the A.E.C.'s programme for this year and the thirty-third to take place in America. Freezing weather and high winds caused its postponement four times after the scheduled zero hour.

The "nuclear device" was dropped from a U.S. Air Force B-36 bomber and exploded at a height of not more than 1,500 ft. There was little spectacular about the blast—a sheet of yellow light in semi-circular form above the desert hills of the proving-ground sixty miles north of Las Vegas. Soon a mushroom-like cloud formed and, in a sixty-mile-an-hour wind, rose upwards, spreading its feathery steam to 17,000 ft. The official observers, at a distance of thirty miles, heard a thunderous boom. But in Las Vegas no noticeable shock was felt, though in previous tests shock waves have been strong enough to shatter windows there.

It is reported that the "device" or "bomb" was of low power, comparable with those set off in Nevada four years ago. It had been selected for this first test of 1955 because, in the current adverse weather, it involved a minimum chance of creating a radioactive dust cloud, which could be carried over neighbouring inhabited areas. But the purpose of the device has not been disclosed. Presumably it was a bomb in experimental form. Possibly it may have been intended as the basis of a new military weapon. Or it may have been designed mainly to provide further information about the general principles in the development of nuclear fission. According to the original schedule of the Atomic Energy Commission, it was to have been the second of its new series of nuclear experimental explosions.

THE NUCLEAR CLOUD IS FORMED: This mushroom-like effect follows the explosion of the fireball. The dome-shaped cloud is moving upwards, sucking the thick stem of dust and smoke behind it.



THE EXPLOSION RISES: The white lethal cloud is now above the Nevada Hills. This device involved a minimum chance of creating radioactive dust which could be carried over near-by settlements.

SURGING TO A HEIGHT OF 17,000 FT.: The "bomb" exploded at an altitude between 1,000 ft. and 1,500 ft. The flimsy-white cloud rose to more than 17,000 ft. in a sixty-mile-an-hour cross-wind. It was not disclosed whether the device was a military weapon or was exploded to obtain further information about nuclear fission.

SNOW AND ICE RETURN

Once More Roads are Blocked and Communities in the North are Isolated by Bad Weather

On left—

SNOW COMES TO GLORIOUS DEVON : This picture was taken at Plymbridge and shows the effect of the very heavy snowfall last week-end. On Sunday 8 inches of snow fell on Dartmoor and many bus services in the Western Counties were suspended. The bad weather brought snow and ice to all parts of the country and to much of Europe. Once again Scotland was the worst hit. The R.A.F. and naval air services carried out several mercy flights and dropped fodder to isolated crofter communities. The road conditions during the week-end were, according to the Automobile Association, the worst for eight years, and at Kew the ground temperature of 2 degs. was the lowest for more than thirty years. In Edinburgh a ground temperature of zero degs. was recorded.

ROAD TROUBLE IN SCOTLAND : This lorry, which was towing a snowplough, was on its way to clear roads blocked by drifts when it skidded on the Old Meldrum to Inverurie road. Workmen are trying to free the lorry, which blocked the road.

HELD UP BY A BLIZZARD : A long line of cars and lorries wait at the side of a road near Stonehaven for a chance to continue their journey. Because much of the road was blocked by heavy falls of snow, single-line traffic was working.

THE POLICEMAN'S LOT WAS NOT A HAPPY ONE : A picture taken during the week-end at Ludgate Circus, looking along Fleet Street. Although no serious drifts occurred in the London region, much traffic was held up by the icy road surfaces.

On right—

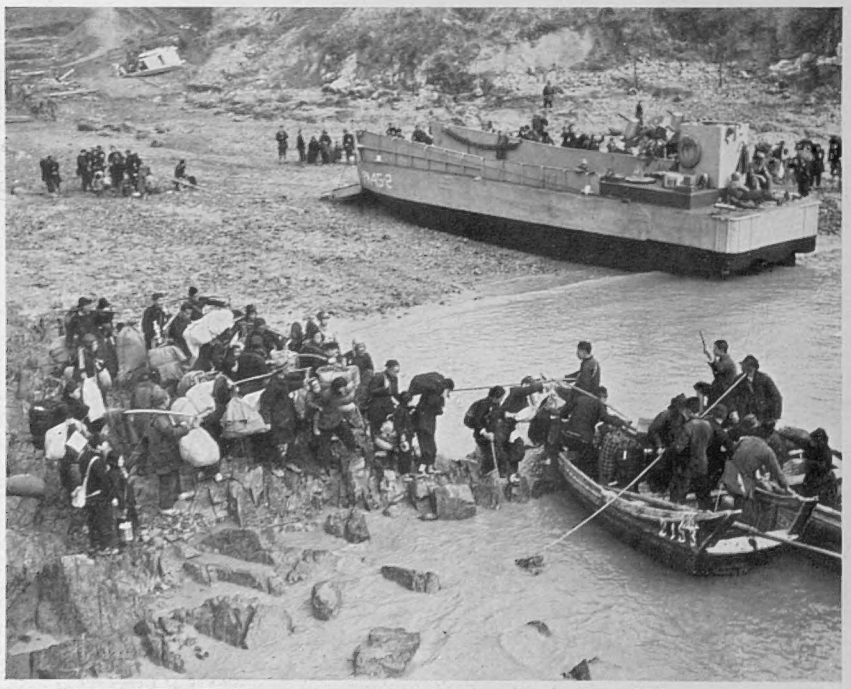
A CHRISTMAS-CARD SCENE FROM LONDON DOCKS : The Upper Pool of the Thames, showing barges, ships and cranes well covered with snow. At London Airport, flying was continued despite the frequent blizzards which swept the airfield.

THE EVACUATION FLEET WAITS: Landing craft of the U.S. Navy and the Chinese Nationalist Navy wait patiently in the bay of one of the Tachen Islands for their turn to move to the jetties. They were part of the amphibious force of the U.S. Seventh Fleet whose warships and aircraft covered the operation, which was successfully completed without incident.

FAREWELL TO THE TACHENS

As the Off-shore Islands are Successfully Evacuated by Chinese Nationalist Forces, a New Threat to Quemoy and Matsu Endangers Peace in the Formosa Straits

The peaceful evacuation of the Tachen Islands was not followed, as had been hoped, by a peaceable solution to the Formosan crisis. For a start, the Chinese Communists gleefully occupied the islands within twenty-four hours of their evacuation, announcing that they were the first stepping-stones to the eventual capture of Formosa itself. At the same time, opinion in the United States hardened on the question of the defence of Quemoy and Matsu, which are very much closer to Formosa. But they are so insignificant that it must be doubtful whether their capture by the Chinese Communists would provide a direct threat to General Chiang Kai-shek's stronghold. Nevertheless, it is felt in Washington that any further retreat before Communist forces would not only cause the United States to lose its remaining prestige in the Far East and encourage the Chinese Communists to more rash actions still, but that it would also deal a hard, possibly fatal, blow to the morale of Nationalist China. Accordingly, the opinion is gaining ground that the United States Government would undertake the defence of Quemoy and Matsu, even though no such specific undertaking had been made public. At the same time comes a report from a well-known American columnist, at present visiting Formosa, that the defence of these islands was, in fact, guaranteed to the Nationalists by Mr. Dulles, but that this guarantee went further than President Eisenhower was prepared to go. Whether or not this private guarantee has been repudiated, it is apparent General Chiang Kai-shek expects American aid in the defence of the two islands.



MIND YOUR STEP: Civilians tread cautiously over the rocks which lead them to a sampan. They were then taken to a U.S. Navy landing craft lying off-shore. Meanwhile, the landing craft in the background waits for the tide to turn.

CHIANG'S TROOPS RETURN SAFELY TO FORMOSA: Chinese Nationalist troops jam the deck of a landing craft on their arrival at Keelung. The men were part of the Chinese Nationalist 46th Division; 10,000 men were taken off the Tachens to Formosa.

A PEOPLE UPROOTED: Civilians from the Tachens wait to join the long, patient queue which stretches down to the jetties, where the landing craft waiting in the bay will pick them up and take them to the safety of Formosa. Nearly everyone is carrying some burden, for each family took all its movable possessions, and the smallest of the children had to be carried as well.

On left—

NOBODY'S TACHEN ISLAND: The hills are deserted, the town's buildings stand empty. There is no sign of life on land or in the little harbour. This aerial view of the Lower Tachen Island shows this forward outpost after the evacuation had been completed. Within twenty-four hours of the departure of the last Nationalist soldier, Chinese Communist troops from the mainland took possession of the islands. In all, over 22,000 people, including 8,000 civilians, were evacuated from the Tachens. The operation proceeded without a hitch, and without any interference from Communist forces. Although two United States aircraft were lost, it was stated that they had strayed beyond their allotted boundaries. Of the 14,000 troops on the Tachens, 4,000 guerillas were conveyed to the islands of Matsu and Quemoy, which are believed to be the next targets for the Communist forces.

THE QUEEN WITH HER ROYAL GUESTS : At Buckingham Palace the Queen and the Duke of Edinburgh entertained the Shah and Queen Soraya to luncheon. For this happy picture they were joined by the Duke of Cornwall and Princess Anne. Among guests at the luncheon were : Queen Elizabeth the Queen Mother ; the Persian Ambassador and Madame Soheily ; Sir Winston and Lady Churchill ; Sir Anthony and Lady Eden ; Mr. Anthony Nutting, Minister of State, Foreign Office, and Mrs. Nutting ; Sir Ivone Kirkpatrick, Permanent Under-Secretary, Foreign Office, and Lady Kirkpatrick ; and Sir Guy Salisbury-Jones, Marshal of the Diplomatic Corps.

THE SHAH AT BUCKINGHAM PALACE

The Persian Royal Visitors are Entertained by the Queen ; On Another Day They Watch a Football Match

On right—

AT A FOOTBALL MATCH : The Shah and Queen Soraya paid a visit to Highbury, in North London, to see an Association Football match between Arsenal and Leicester City. The match was drawn. During their stay the Royal visitors had an experience of the bitter weather of this English winter.

THE SHAH IN ENGLAND

Scenes at the Arrival of the Shah of Persia and His Beautiful Queen Soraya to Spend Six Days in England on a Private Visit

The visit of the Shah of Persia was a private one, but England took every opportunity to give a warm welcome to him and his lovely Queen Soraya during their six-day stay. They had a busy programme of engagements, which were planned to include tea with the Queen Mother, luncheon with Queen Elizabeth and a dinner with Sir Anthony Eden. Sir Winston Churchill was to be their host at No. 10, Downing Street before they left.

They arrived at Southampton from America in the *Queen Mary*. There they were welcomed to England by the Duke of Wellington, the Lord Lieutenant of Hampshire, Mr. Ali Soheily, the Persian Ambassador, and Admiral Sir George Creasy, Commander-in-Chief, Portsmouth. The Shah spoke of his happiness in being in England. He said: "Iran's cause is first and foremost the cause of freedom and peace. Britain, that bastion of democracy, individual liberty and human freedom, has always stood and striven for peace. A strong Iran, capable of dealing effectively and expeditiously with subversion within and without, will undoubtedly be a major asset in the ranks of the freedom- and peace-loving nations. I feel confident that the next chapter of relations between our two countries will produce a new basis of firm friendship."

The Royal party travelled by special train to London. They were met at Waterloo by the Duke of Gloucester. The Shah and the Queen planned to leave by air for Germany last Wednesday.

THE SHAH AND HIS QUEEN: They are seen on their arrival at Southampton for their six-day visit to England. On landing, the Shah spoke of the "calm and clear" relations between his country and Britain.

On left—
MOVED BY HER WELCOME: The hand of the lovely twenty-one-year-old Queen Soraya strays to her eyes in reaction to the warm welcome she received.

ARRIVAL AT WATERLOO: The Shah and the Queen were greeted by the Duke of Gloucester. Then six-year-old Sarvin Farzaad presented a bouquet to Her Majesty.

QUEEN SORAYA GOES OUT TO DINNER: She was accompanying the Shah to the dinner given in their honour by Sir Anthony and Lady Eden. Among the guests were Mr. Butler and Mr. Attlee. Earlier in the day the Shah and Queen Soraya had tea at Clarence House with Queen Elizabeth and the Queen Mother.

A WORLD SURVEY

PICTURES OF EVENTS AND PEOPLE IN THE NEWS IN ASIA, AFRICA, EUROPE AND AMERICA

MR. NEHRU'S CONGRESS PARTY FIGHTS THE COMMUNISTS IN ANDHRA: Congress Party supporters, pulling gaudily decorated floats, are seen entering the Guntur constituency, a Communist stronghold, during the campaign in the Andhra State General Election. The election was a great test in the struggle between Mr. Nehru's Congress Party and the Indian Communist Party, which is firmly entrenched and very well organised in Andhra State. Voting began on February 11 and goes on until February 27, and the results will not be known for some time. However, it is believed that the Congress Party's campaign has met with some success. The virulence with which the Congress Party has attacked Communists at home and abroad was surprising in view of Mr. Nehru's conciliatory attitude towards Russian and Chinese leaders. The Congress Party was believed to have received unexpected support from Moscow. Widespread publicity was given to articles in *Pravda* praising the Congress Party's economic initiative, whose existence the local Communists had previously denied. The election was caused by the defeat of the Congress Party in the state legislature.

OFF TO THE POLLS IN ANDHRA: Supporters of Pandit Nehru's Congress Party go to the polls in the Chalipali constituency, armed with flags and an umbrella. The election in Andhra State is of great importance, for it provides a direct clash between the State and National Government Congress Party and a well-organised local Communist Party.

REACTIONS TO THE SURRENDER OFFER TO MAU MAU: *On left*—Three young Mau Mau who gave themselves up under the recent Government surrender terms being interrogated by an Assistant Inspector in the Kenya police at the police station in Kabete, a suburb of Nairobi. *On right*—European settlers marching to the Parliament buildings in Nairobi, where they presented a petition demanding the withdrawal of the amnesty offer. More than seventy settlers took part in the march to the Legislature, where they were received by five members. The march was only one sign of the many protests from the European population against the surrender terms, under which Mau Mau terrorists were promised that their lives at any rate would be spared if they surrendered. By the end of last week 120 terrorists had given themselves up, and Mr. Michael Blundell, Minister without Portfolio and member of the Kenya War Council, said that there was every chance that the offer would be successful, and that by April the threat of terrorism from the forests might have been removed.

MARSHAL TITO RETURNS TO BELGRADE: The Yugoslav President driving through Belgrade with his wife on his return to Yugoslavia after an absence of more than two months on a goodwill mission to India and Burma. Mrs. Tito is the President's third wife, whom he married in 1952. Marshal Tito made no fewer than three homecoming speeches in the twenty-four hours that followed his arrival in the cruiser *Galeb*.

EGYPTIAN PRISONERS LOSE THEIR CHAINS: With their shackles on the ground in front of them, prisoners at Tura Prison, about twelve miles south of Cairo, listen to the Minister of War, Major-General Hakim Amer, at a ceremony which abolished the practice of shackling prisoners in Egypt. The Minister had used a hammer to loosen the chains of prisoners to symbolise the "smashing of existing shackles."

"TALLULAH" AFTER A HEAD-ON COLLISION: The oil tanker *Tallulah* limping into dock with her bows stove in after she had come into collision with the super-tanker *Orion Planet* off Santa Barbara, California. The *Tallulah* was carrying 135,000 barrels of gasoline. The damage to the two vessels was estimated at more than £360,000, but none of the 100 seamen aboard were reported injured.

TWENTY-FIVE DOWN-AND-OUTS DIE IN A CHICAGO FIRE: The gutted ruins of the Barton Hotel after a fire which claimed the lives of at least twenty-five persons, and injured sixteen. The hotel was mostly occupied by down-and-outs, who paid four to six shillings a night for their rooms. These rooms were, in fact, cubicles 4 ft. wide, 6 ft. long and 7 ft. high. As far as can be ascertained, the fire started at 2 a.m., when 245 men were asleep in the four-storey building. One of the tenants, aged about seventy, who was in the habit of rubbing himself with alcohol, ran screaming into an aisle between cubicles when the alcohol caught fire. He was one of the men who died. Within a few minutes the building was in flames. Many of the tenants were choked by smoke as, panic-stricken, they tried to make their way towards the exits.

On right—

MARGOT FONTEYN ON HER HONEYMOON: The Sadler's Wells ballerina with her husband, Dr. Roberto Arias, aboard the yacht *Edmar* on their honeymoon cruise in the Bahamas. Miss Fonteyn was married in Paris at the beginning of the month, and the couple returned to London after barely a week in the Caribbean. Miss Fonteyn returned to the stage at Covent Garden, while Dr. Arias took up his appointment as Panamanian Ambassador in Britain.

CONTRASTS IN ROME—THE OPENING OF THE UNDERGROUND RAILWAY AND THE SQUATTERS AT AN OLD RACECOURSE: *On left*—The underground train arriving at the Termini Station on the inaugural day of Rome's Metropolitana. Starting from the Termini Station, the railway runs for eleven miles beneath the Colosseum and the Arch of Constantine. The project was originally envisaged in 1938, but the war prevented the plans coming to fruition, and the citizens of Rome have always been sceptical about its feasibility. There was surprise in some quarters when the necessary excavations did not destroy the city and the railway, inaugurated by the Italian President, did not cause the historic buildings to crumble. ***On right*—Families without a home have solved their problem by building huts on the Parioli Racecourse in Rome, and some have taken advantage of the additional shelter afforded by the grandstands.** Parioli has now become one of the fashionable quarters of Rome, and many of the luxury flats there overlook the racecourse and its squatters. As can be seen, the squatters have done a great deal of house-building, making use of wood and wire to construct small bungalows. Nevertheless, they expect to be evicted at any time.

MAINLY VERTICAL FLIGHT

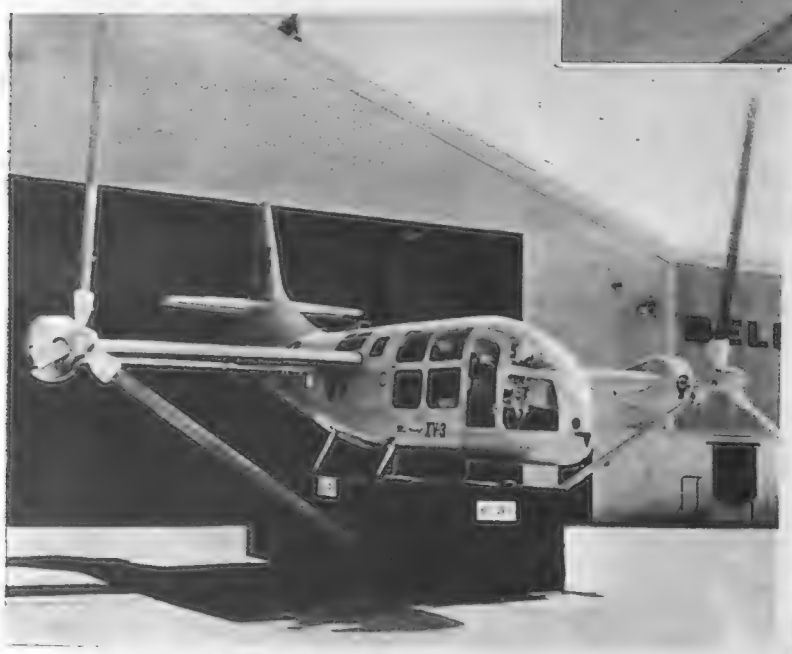
RECENT AVIATION DEVELOPMENTS IN BRITAIN AND THE UNITED STATES

In a few years' time, when the vertical-take-off projects now in the experimental stage are ready for production, the prospective customer will have a hard task trying to choose from the many varieties which will be offered him. The Bell XV-3 which is illustrated here belongs to a brand-new family of V.T.O. aircraft. For take-off, the airscrews will be in the position seen in the top picture, and the aircraft will be flown as a helicopter. Once airborne, the rotors will be swivelled slowly until they are facing forwards like normal propellers. As this procedure is carried out, the forward speed of the aircraft will steadily increase until the wings themselves supply all the lift needed to keep the plane airborne. When landing, the propellers will be swivelled upwards until they become rotors once again.

The XV-3 has several advantages over the other types of V.T.O. aircraft, but is itself limited in certain respects. The rotors, although specially designed for a dual purpose, do not make very efficient propellers, and top speed will be limited by this fact. The Bell Company claim that it will be flown at a top speed of "over 175 m.p.h." The speed record for helicopters is considerably in excess of 200 miles per hour.

The three-bladed rotors are driven by a single engine mounted in the fuselage behind the cabin. The aircraft is 30 ft. long and has a span of the same length. It is the second aircraft of its type to be revealed in the United States this year. In January it was disclosed that the Transcendental Aircraft Corporation were conducting experiments with a similar type of aircraft.

YET ANOTHER BELL V.T.O. AIRCRAFT IN THE UNITED STATES: This is the Bell XV-3, which is designed to take off vertically like a helicopter with the aid of two large airscrews. Once at a safe height, the rotors will be swivelled until they are pointing forwards. In forward flight, the necessary lift will be obtained from the rather short wings.



THE XV-3 IN POSITION FOR FORWARD FLIGHT: Because of the large diameter of its propeller-rotors, the aircraft has to stand on a large box. The XV-3 is designed on entirely the same principles as the other Bell V.T.O. project illustrated in THE SPHERE of February 12, except that rotors are used instead of jets.

A PRACTICAL APPLICATION OF JET LIFT IN BRITAIN: **A Meteor jet fighter which employs jet lift to cut down take-off and landing runs by a considerable degree.** The two Rolls-Royce Nene engines have been specially adapted so that the pilot can deflect the jet stream at an angle of 60 degrees downwards, thus relieving the wings of some of their load. The auxiliary jet pipes can be seen protruding below the engine nacelles. The installation of the deflector unit was carried out by Westland Aircraft under a Ministry of Supply contract. The aircraft was first flown with the deflection device in May last year and since then many other flights have been made. The pilot, Squadron-Leader Leo de Vigne, reported that using 60 per cent. of the available thrust through the deflector unit, the approach and stalling speeds were reduced by 20 per cent. He was also able to check his rate of descent and go into a climb without any appreciable increase in forward speed. Apart from its use in the "Flying Bedstead," jet deflection has also been used, notably in France, and America for braking purposes after landing. The deflection device installed in the Meteor should be available to reduce aircraft landing and take-off runs many years before the principles embodied in the "Flying Bedstead" come into everyday use.

On left—

A TURBO-PROP TRANSPORT STRETCHES ITS WINGS: The first prototype of the Lockheed YC-130 medium cargo transport aircraft, dubbed the "Hercules" by the U.S.A.F., is shown in full flight for the first time. The YC-130 is powered by four Allison T38 turbo-prop engines and is in production for the United States Air Force for use in assault and support missions and for troop-carrying.

HUNTERS IN SERVICE

Three Squadrons of this Speedy Fighter Plane are Now in Service with the Royal Air Force

For over a year now there has been much agitation in Parliament for Britain's latest fighters and bombers to be put into squadron service. It is to be hoped that the twenty-four Hawker Hunter fighters seen on this page mark the beginning of the modernisation of the R.A.F. The Hunter prototype first flew in July 1951, and since that time many hundreds of flights have been made in the small number of prototypes available for testing. The scarcity of prototypes has played a significant part in the delay before this aircraft could be put into service. Even now, the effects of this are still apparent. As stated in the recent Government White Paper on the Supply of Military Aircraft, certain marks of the Hunter experience difficulty in firing their guns at high altitudes. In the rarified atmosphere the explosions of the guns disturb the airflow into the jet engine, and this may lead to the engine stalling through lack of air. This is a difficulty which has been encountered in other aircraft in other countries, and has, in the past, been successfully overcome.

The Hunter is a single-seat day fighter, which owes much of its speed to its clean lines. Not only is it in large-scale production for the R.A.F., but under American "off-shore" purchasing arrangements, it is being built under licence in several European countries, for service in their air forces. The cockpit is fully pressurised and air-conditioned, and the pilot is protected by armour-plate and a toughened glass windscreen. A Martin-Baker ejection seat is fitted. The armament consists of four 30-mm. Aden guns installed near the nose of the fuselage. An important point with regard to the Hunter as a fighter is its speed of turn-round. During the demonstrations a plane landed, was refuelled, re-armed, inspected and ready for take-off in seven minutes.

HAWKER HUNTERS ON PARADE: Twenty-four of Britain's fastest fighters in squadron service are seen streaking across the sky over Wattisham, in Suffolk.

On left—
WHAT THE WELL-DRESSED HUNTER PILOT WEARS: Pilot-Officer T. Murray is well wrapped up against the rigours of sonic flight.

On right—
LINED UP FOR INSPECTION: There are three squadrons of Hunters now in service: 43 Squadron, 257 Squadron and 263 Squadron. All three squadrons took part in these demonstrations.

THE NUCLEUS OF BRITAIN'S NEW AIR FORCE: One of the pilots flying these Hunters was an American, who is on an exchange posting. He has flown United States Sabre aircraft and has said that the Hunter has better speed and climb than this plane. To take the air-to-air pictures on this page, press cameramen were carried in an American *Flying Boxcar* freighter. The rear of the fuselage was removed and the cameramen took their pictures leaning out of the back.

FEBRUARY— FROST AND HONEY BEES

Usually One of the Driest Months in the English Year, February is Often Known for its Frosts; but its Bright, Sunny Days Attract the Honey Bees from their Hives

By BRIAN VESEY-FITZGERALD

IN ENGLAND AT THE HEIGHT OF THE 1940 WINTER: Artistic effort by Nature on a roadside in Kent, caused by splashing floodwater which subsequently froze during the early days of the year.

"FEBRUARY FILL-DYKE." It hardly bears thinking about after the sort of weather we experienced last year—and 1954 was the wettest year in Britain for more than half a century, and the wettest in Wales since 1872. But the term "February Fill-Dyke" gives the wrong impression. It is usually taken to mean that there is a great deal of rain in February, that it is a very wet month. It frequently is a very wet month—underfoot: but from the rainfall point of view February is usually one of the driest months in the English year.

It is true that the dykes do fill, and there is often a good deal of flooding on the lower ground, but this is due, as a general rule, not to present rain, but to persistent rain in the past few months or to the sudden thaw, accompanied by a little warm rain, of a heavy snowfall. That was what happened with the great Fenland floods of 1947: though actually that flooding came in March, and 1947 was an exceptional year, anyway. So far from rain, February is much more likely to be a month of frost in England and of snow in Scotland. This is, I am told, because the sea temperature is a good deal lower in February than it is in November and because our prevailing winds are westerly.

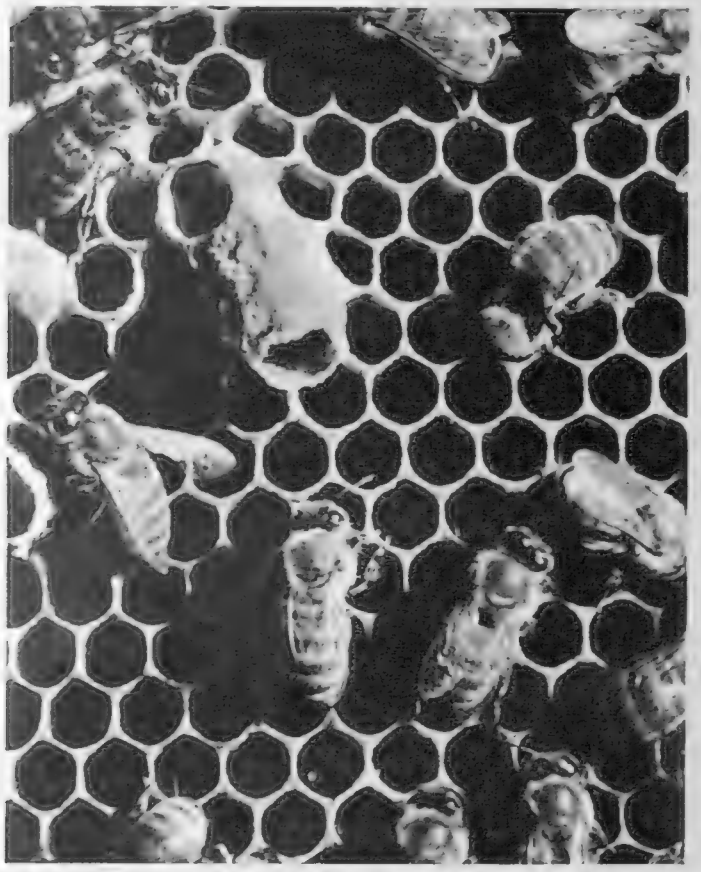
Be that as it may, if I remember particular Februaries, it is because of frost and not because of rain or floods. The February weather most people remember is, of course, that of 1947 (though one might equally well remember January of that year), but the February that sticks in my mind is that of 1940. And just for one day. There had been one or two heavy snowfalls in the previous month—and on one occasion I had to walk nineteen miles (nine-and-a-half to work and nine-and-a-half back again) because it was impossible to take a motor-car out, and the one bus (it then ran two days a week, making one journey each day) did not run, though it was, in fact, one of its days. Walking through thick snow in hilly country is very hard work.

There are some drawbacks to living in the country in winter. There were some very severe frosts at the beginning of that year, too, and stories of sheep being frozen as they stood on the Hampshire Downs and of small birds dying upright. It must all have impressed me greatly at the time: but it is not really what I remember. I have to think back to remember those sort of incidents. I do not have to think to remember the one particular day in February.

This was the morning when the world awoke clothed in surpassing beauty, a beauty such as I had never seen before and shall never, I feel sure, see again. The country people called it "the silver rain." But the meteorologists had, of course, a simple and humdrum explanation for it. Whatever the explanation, the result was not humdrum, but magical: pure magic that left nothing untouched. The grasses were rods of silver, the gaunt stems of dead, giant hemlock became tall chalices of silver; an old piece of wire-netting the delicate hair-net of a goddess. Every twig, every scrap of litter, each telephone wire drooped in disarray, every signpost was transformed overnight into the gorgeous jewels of the regalia of a fairy queen. Every leaf was tasselled, every berry enriched. Even the dungheaps in the lanes glistened and the humblest weed was a thing beyond price. The string upon which, each Monday morning, our household washing was displayed became a string of pearls.

The thatch of the gamekeeper's cottage was a hood of silver and above it the tracery of the elms, misty-white clouds against the purest of blue skies. The ancient stone bridge over the river bore icicles of astonishing length and thickness, and from the cruel black ice at the water's edge the reeds stood forth as glittering spears. It was, indeed, a fantastic world, a world wrapt in such utter silence that the movement of a bough sounded like a pistol shot. The rooks, finding even the tree-tops untenable, came down into the garden and drove the smaller fry from the bread-crumbs. And I remember that a lapwing came on to the lawn that morning, the only time I have been so honoured.

And then the weather returned to normal. Another wave of the magic wand, and there was a day promising spring. And this, I think, is the important thing about February. There may be hard frosts or great floods, but there are always days promising spring.



"HONEYBEES AND QUEEN CELL": This picture by M. P. Ochotta, of Edmonton, Alberta, Canada, is one of many at the tenth Chicago International Nature Photographic Exhibition at the City's Natural History Museum. The Exhibition is being held under the joint auspices of the Museum and the Chicago Nature Camera Club.

With the exception of 1947, I can recall no February in which I have not, on one or more days, seen bees out in numbers for a few hours. There may be such days even in early February. It is at mid-day, of course, that you get this illusion of spring that deceives even the bees. Winter does not set in until the sun sets. And have you ever noticed how fugitive February sunsets are? How very different from the sunsets of October and November? There is no prodigality of colour against the gathering gloom of night: there is no more than a streak of the sinking sun, and then a lingering orange and pink and green, with the green predominant. Night is coming—and there is an increasing chill—but at sunset in February you are sometimes conscious not of darkness, but of light.

It is not only the brilliant sunshine in the morning and early afternoon that gives this illusion of spring. On the southern sides of the copses which are open to the sun there are already a few sulphur-coloured catkins on the hazels, and in the hedge-banks the dog mercury will be in flower. In a mild February there will be primroses, too. The primrose is always thought of as a March flower—and so it is: but it is also a winter flower. I have found them in north Hampshire in December; not just in ones and twos, but in clumps, the flowers rather small, but as yellow and as sweet-scented as those of spring.

But to return to the honey bees: why do they come forth from the hive on these bright winter days? I know that there are winter bees. I know that two Swiss scientists, Dr. Ruth Lotmar and Dr. Anna Maurizio, have shown that there are two distinct kinds of bees, "summer" bees and "winter" bees, and that these differ from one another physiologically, and that it is to their physiology that the winter bees, which are reared in the autumn, owe their long lives. The "summer" bee quickly wears herself out, labouring to feed the brood. The "winter" bee, excused this constant activity, is enabled to live for months; indeed, if it is not foolish, throughout the winter.

But none of that explains why some should come forth from the hive on bright winter days. On the face of it, it is the height of foolishness. Yet bees are not normally foolish; far from it, in fact. So why? It is so short a day. It will not start before half-past eleven at the earliest, and it will be over, and the bees back in the hive before three. If they are seeking honey, there is not much for the finding. I have noticed some of these February bees flying around the stackyard of a neighbouring farm, at a distance of more than half a mile from their hive, but I have no idea at all why they should do so. It is not the sort of place where you would expect honey to be found. I wonder if, perhaps, the sunlight rouses them, and they remember some happy hunting-ground of the autumn, and fly off to it, and return disappointed? Or perhaps it is that some of the more energetic members of the hive want a little exercise, and fly just for the joy of flying in the bright sunshine?

If so, they run a terrible risk. They run a terrible risk in any case, whether searching for honey or flying for fun. A heavy cloud comes over the sun (it is likely enough to happen on any bright February day in England), the white mist suddenly sweeps down over the land and a bee any distance from the hive is surely doomed. She will struggle with immense courage to reach the hive, but the sudden drop in temperature, and the withdrawal of the sun, are terribly weakening, so, chilled, she will fall to the ground. I have found them thus within a few feet of the hive.

Death does not always come swiftly to the bee caught by the cold. I think, perhaps, they may sometimes lie for hours before death releases them. At least, I have more than once found bees lying on the ground, apparently dead, and I have picked them up, and held them in my closed hand, and soon begun to feel them stir, the warmth of the hand reviving them.

And this, of course, is the explanation of the superstition of the old English bee-masters that dead bees could be restored to life by warmth. It is a superstition that is not wholly dead even yet. I have an old book—my copy is of the fourth edition and is dated 1720—entitled *The True Amazons: or The Monarchie of Bees, being a New Discoverie and Improvement of those Wonderful Creatures*, by Joseph Warder, who lived in Croydon, and who was a physician. Warder was convinced that he could raise bees from the dead, and maintains in his book that he has done so hundreds of times. Warder used to pick up the "dead" bees beside the hive, and hold them in his hand, twenty or thirty at a time.

In less than a quarter of an hour they were restored to life, and able to fly to the hive. "By this means," he says, "I have saved the lives, or, rather, raised from the dead, many thousands of bees." And, when the "dead" bees within the hive were too numerous to hold in the hand, he employed other methods. "I have taken four or five Dutch thin Boxes, and with a Nail (or Bodkin) making holes in the covers, to give them air, have gone and filled these Boxes with dead Bees, and put them in my Breeches pockets (that of the Coat or Waistcoat is not warm enough), and so let them remain Half an Hour or more; and then, opening the Boxes in the Garden, they have all gone home as before." And once, he says, he restored to life a whole hive of dead bees by putting them on plates in the sunshine. When they were alive again, he fed them on honey, and they recovered their strength. These bees had "died" from hunger, not from cold.

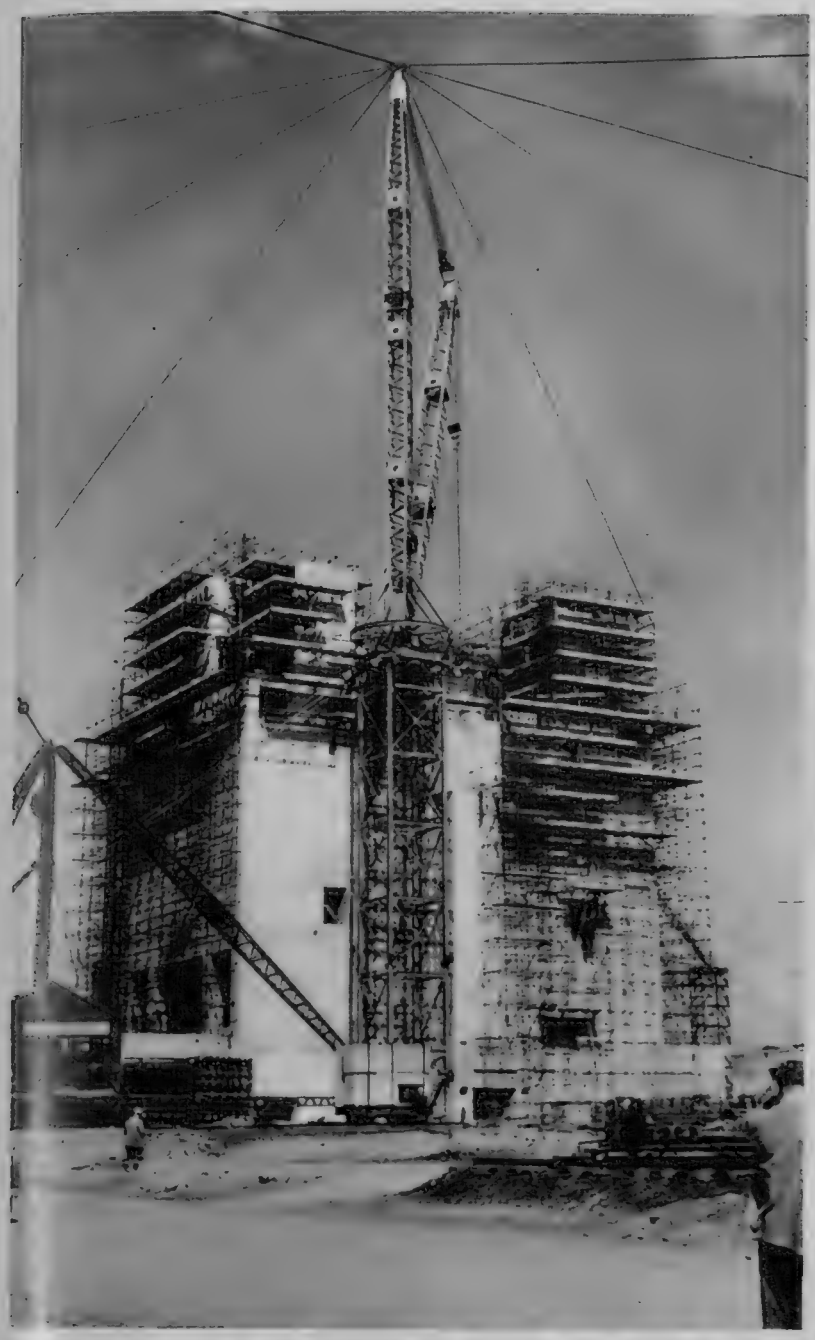
Honey bees have been kept by man for several thousands of years—indeed, as Dr. H. M. Fraser has said, "the beginning of the art of bee-keeping is lost in the mists of antiquity"—and naturally there have been many superstitions about them and particularly about their origin. Virgil, for example, believed that the bees fetched their young from the flowers and believed also in a King bee rather than a Queen bee. The "young from flowers" idea did not survive for very long, but the King bee theory had a very long life. Rousden, who was contemporary with Warder—and, judging by Warder's book, a serious rival—believed in a King bee as well as a Queen bee. Warder describes the theory as "antiquated impertinence" and "unexperienc'd whimsey." We have, unfortunately, no record of what Rousden thought of Warder, the physician who could raise from the dead.

Yet long before this, in 1609, the Reverend Charles Butler, a Basingstoke man, had, in his *The Feminine Monarchie*, established that the drones are the male bees and stated that the queens are females.

To-day we know a great deal about honey bees and their behaviour. The work of Dr. Colin Butler in Britain, of Professor K. von Frisch, of Dr. M. Lindauer, Dr. G. A. Rosch, Mr. C. R. Ribbands, Mr. H. L. Nixon, and many others, has prised wide open the mysteries of the hive. We know about bee dances and bee "language" and "queen substance." But I would like to know why honey bees come out on the occasional sunny days of February, and if there is really any hive necessity which compels them to do so.

ELECTRICITY FROM ATOM POWER STATIONS

Britain's First Experimental Nuclear Power Station at Calder Hall, Cumberland, which Will Produce Electricity as Part of a Ten-Year Plan Costing £300,000,000 for the Peaceful and Commercial Development of Nuclear Power



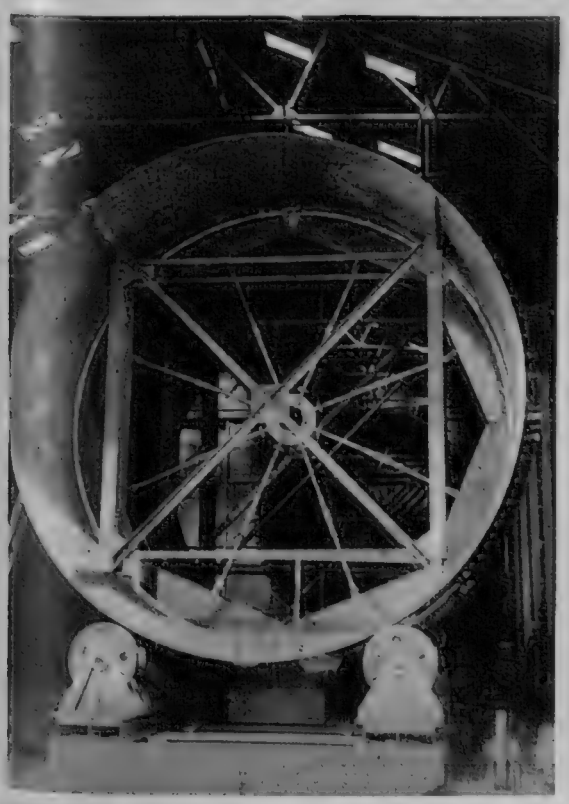
ONE OF THE REACTORS AT THE EXPERIMENTAL NUCLEAR POWER STATION : This is one of two identical reactors being built at Calder Hall, in Cumberland. Gas-cooled, they will use natural uranium moderated with graphite.

Last week the Government announced its plans for the development of nuclear power on a commercial scale as a source of heat to drive electrical generating plant. By 1965 it is planned that twelve nuclear power stations will be in operation, with a total capacity of 1,500,000 to 2,000,000 kilowatts. Some idea of what these atomic power stations will look like can be gained from the experimental station now under construction at Calder Hall, Cumberland.

Calder Hall is being built at a cost of some £20,000,000, and will produce the very valuable fissile material, plutonium, for military purposes, as well as electricity. There are two nuclear reactors, or atomic piles. Using natural uranium as a fuel and graphite as a moderator, these reactors are to be gas-cooled. The first of the new power stations will have reactors constructed along these lines. Later a second type of reactor may be built for commercial use, which will be liquid-cooled. This type is widely used in the United States, and will eventually prove more economic than the gas-cooled reactors. At present, however, they require the use of metals which are not readily available in this country.

THE FIRST OF THE HEAT EXCHANGERS IS HOISTED INTO POSITION : Looking like—and performing the duties of—a boiler, but known as a heat exchanger, it is 80 ft. long and can be seen being hoisted into position at one of the Calder Hall reactors.

PART OF THE REACTOR PRESSURE VESSEL : It is dwarfed by the 120-ft. building in the background, which will house the atomic pile.



THE GREAT HEAT EXCHANGERS WHICH ARE BEING INSTALLED IN THE REACTORS AT CALDER HALL : Two views of the 80-ft. heat exchangers, or boilers. At Calder Hall there are eight of these. When the nuclear power station is operating, these heat exchangers will be used to create the steam which will run the generating plant.

It is expected that it will be possible to extract as much heat from one ton of nuclear fuel as from 10,000 tons of coal. Even the limited amount of power that will be available if the present ten-year programme is successfully completed would be the equivalent of some 6,000,000 tons of coal a year. This does not mean to say that coal will cease to matter: certainly in this century the advent of nuclear energy will merely take the load off an industry that is at present unable to meet all the demands made upon it.

The cost of the ten-year programme is estimated at £300,000,000, and that sum does not include power stations which will be begun, but not completed, before 1965. On the other hand, this figure should be off-set by the amount that the Authority would have spent on coal-fired power stations which produce an equivalent amount of electricity. It is expected that the cost of electricity from the most efficient type of nuclear power station will be the same as that from coal-fired stations.

It is not yet known where the first dozen nuclear power stations will be sited. They are now so designed that anything like an "atomic explosion" is impossible. Nevertheless, no risks will be taken, and it has already been decided that no stations will be built in the vicinity of heavily-populated areas.

The programme announced by the Government gives practical implementation to what have hitherto been only paper ideas, and it opens up new horizons for industrial Britain. But the development of nuclear power stations will take time, and by 1975 it is estimated that they will still be responsible for barely a quarter of the country's generating capacity.

THE FIRST GREAT ANTARCTIC CONTINENTAL EXPEDITION: From 1901 to 1903 Captain Scott led the British National Expedition in the Antarctic. Among his junior officers was Ernest Shackleton. In this drawing the artist recalls some of the clothing and equipment then used. The four members of the expedition are manhandling their sledge near the base in McMurdo Sound. Behind them is the volcanic Mount Erebus, on Ross Island. Scott went 300 miles through Victoria Land, and achieved the "Farthest South" to that date.

THE UNKNOWN CONTINENT

Five Million Square Miles of Snow and Ice Surround the South Pole. The Desolate Antarctic Still Remains Largely Unexplored. Now Plans are Being Made for a New Expedition by which the Glorious Tradition of Britain in Antarctic Exploration will be Carried On

By E. A. A. SHACKLETON, M.P.

With Special "Sphere" Drawings by VICTOR COVERLEY-PRICE

Across the south of the globe stretches the sixth of the large land masses of the earth. It is the vast area of the snow and ice of the Antarctic, still, for the most part, untrodden by man. To the mid-twentieth century, with its rapid technical developments in the past fifty years, the South Pole presents a greater challenge than ever before. Recently, plans for Antarctic exploration have come much into the news. The organisation of such expeditions requires very careful and long preparation. It is believed that certain schemes may link with the International Geophysical Year of 1957 to 1958. In this year, according to present information, thirty-five nations will make geophysical observations in many parts of the world. The range of these observations will be wide, embracing many branches of geophysical science. It is hoped that the results will be pooled to the common benefit of mankind.

Antarctic research will have its part. One of the most valuable contributions may well come from a British Commonwealth project. Sir Winston Churchill announced last week that the British Government will give £100,000 towards it. It is a most ambitious scheme, being nothing less than a complete crossing of the Antarctic continent over the South Pole. It was mooted over forty years ago by the great Sir Ernest Shackleton, whose failure to carry it out was, none the less, a glorious chapter in polar history. In this article Sir Ernest's son, Mr. E. A. A. Shackleton, M.P., who is himself a distinguished explorer, outlines the history of Antarctica and the background to the future expeditions.

THE most desolate land in the world, the 5,000,000-sq.-mile Antarctic continent, will be a comparatively busy place if all the present plans for South Polar exploration mature.

A mere 11,000 years ago, according to the latest calculations, a large part of Britain lay under the ice-sheet of the last glacial epoch. But the Antarctic continent of to-day is a far harsher example of the desolating power of low temperatures. It is utterly devoid of land animals and flowering plants. The only botanical specimens to be found on the main continent are a few mosses and lichens. Though the seas, the temperature of which drops little below 30 deg. Fah., abound in seals and the vast wealth of the whaling industry, penguins and sea birds congregate only on the land's edge. They never move far from those comparatively warm waters, which provide their sustenance. Inland the silence is never broken by the sounds of life. Only the roar of the blizzard and the creak of the ice disturbs in this vast desert. Not even the sound of rain is heard except in Graham Land, to the north.

The Antarctic is the opposite of the Arctic in more than the geographical sense. The North Pole

TWO OF THE GREATEST BRITISH ANTARCTIC LEADERS: *On left*—Sir Ernest Shackleton at the time of the Imperial Trans-Antarctic Expedition (1914-1916). With him is Mr. Frank Hurley, on the left of the picture. They are in front of the tent in which they lived while drifting on an ice-floe for six months. *On right*—Captain Scott, who reached the South Pole in 1912, stands with his camera (extreme left). He is photographing some of the cruel desolation through which he travelled to achieve his goal and sacrifice his life.

is in the Arctic Ocean, where the sea is 10,000 ft. or more deep. The South Pole is in the middle of a continent and in the heart of a plateau 10,000 ft. high. The Arctic Ocean is surrounded almost entirely by lands, some of which stretch from temperate climes to within a few hundred miles of the Pole itself. The Antarctic continent is separated from the inhabited lands of the southern hemisphere by hundreds of miles of stormy ocean. The moving pack-ice, which in the north composes the North Pole itself, is in the south an extra barrier which guards the hidden continent. It was not until five years after the Battle of Waterloo, in 1820, that the Antarctic was first sighted.

However, the search for a possible southern continent had started seriously during the eighteenth century. Captain Cook was the first man to explore extensively the approaches to the Antarctic and to penetrate the pack-ice. His voyages were the beginning of a long series of expeditions in which many countries took part. In these the British played a major role.

Many of the names on the Antarctic maps recall the explorers and scientists who sought to penetrate its secrets. It was not until the very end of the nineteenth century that a small party of men successfully spent a winter on shore. Only in the present century came the great continental expeditions, starting with Scott's National Antarctic Expedition (1902), followed by Shackleton's 1909 expedition, which attained a point less than 100 miles from the Pole. Then came Scott's last expedition (1911-1912), which reached the South Pole only to find Amundsen had forestalled him. The Norwegians were technically more advanced in polar travel than the British. Indeed, their experience acquired in the Arctic in the use of dogs had enabled them to travel to the South Pole and back without undue hardship. The fate of Scott and his companions is an immortal part of the British story.

But if Amundsen was a consummate polar traveller, the scientific achievements of the Scott and Shackleton expeditions were of a higher order. A polar expedition has never been regarded by British explorers as an occasion for heroic feats alone. The work of map-making, of geology, of physics and biology, represented the major part of the effort, as it must of any worthwhile expedition.

The attainment of the geographical South Pole did not mean the end of Antarctic exploration. Two thin lines had been driven across the unknown land. But the biggest undiscovered areas in the world remained to be explored in the Antarctic. To a large extent they still remain uncharted to-day.

In the last forty years there has been a change in the type of expedition to the Antarctic. The last big British expedition was Shackleton's Imperial Trans-Antarctic Expedition (1914-16). Their plan was to penetrate the dangerous pack-ice of the Weddell Sea, and thence sledge across the South Pole to join with a party landed by another ship on the Ross Sea side. Hopes of the success foundered with Shackleton's ship, the *Endurance*, when she was beset by Weddell Sea ice and crushed by the grinding floes. After months of drifting, every man of the *Endurance* crew was rescued, to tell an almost incredible story of triumph over disaster. Since then, with the exception of Admiral Byrd's big expedition, the record of Antarctic exploration has been of smaller expeditions with limited geographical objectives. The scientific work has proceeded, ably led by scientists such as the Australian Sir Douglas Mawson. Nobody except the Americans could, after the First World War, command the resources for large-scale expeditions. Lincoln Ellsworth and Byrd pioneered with aeroplanes, but even to-day aircraft have considerable limitations and the main scientific work has continued to be carried out by ground parties.

Over the years firm territorial claims have been made, though by no means established. To-day the entire Antarctic, except for the Pacific sector, where much of the American exploration has taken place, is claimed by one nation or another. Britain, Australia, New Zealand, Norway and France have each claimed their different segments of the Antarctic mainland.

But to claim a territory is one thing, to make good that claim in International Law is altogether more complicated. In the Arctic a slightly dubious but very convenient principle has been more or less established.

(Article continued on page 338)

5,000,000 SQUARE MILES WHICH HAVE STILL TO BE TRAVERSED BY MAN : This map gives the main details of what has been achieved on the Antarctic continent since 1820. Vast tracts still remain uncharted. The Norwegian Amundsen was first at the Pole, beating Scott by a few weeks. More recently, the American Admiral Byrd has flown over it. Shackleton's planned trans-polar route is marked from the Weddell Sea. Various nations have put forward claims to Antarctic territories. The small inset map shows the areas in dispute between Britain, Argentina and Chile.

THE BRITISH POST OFFICE IN GRAHAM LAND : Its establishment is evidence of British administration, which is useful in the British claim to this area. Great Britain, Australia, New Zealand, France and Norway have each claimed different segments of the Antarctic mainland. Chile and Argentina dispute some of the British sector.

THE UNKNOWN CONTINENT *(Continued)*

FIRST AT THE SOUTH POLE: The artist has reconstructed one of the greatest moments in the history of mankind. It was in December 1911, the date usually being calculated as the 14th of the month. Roald Amundsen and his Norwegian party have reached the Pole—the first men ever to do so. The leader has verified his position and plants his country's flag on the southernmost point of the earth, while his companions set up a tent. The dogs had played an important part in Amundsen's precisely planned progress.

TERROR AND BEAUTY IN THE UNKNOWN OCEAN OF ICE: Sir Ernest Shackleton's ship, the *Endurance*, is trapped in the pack-ice and threatened by a gigantic iceberg moving under the influence of deep currents. This picture was taken in 1915 in the Weddell Sea. Later the ship was so crushed she had to be abandoned. This meant the end of Shackleton's great project of a trans-polar crossing. In the face of appalling difficulties, he led his men on an epic journey across ice and sea to safety.

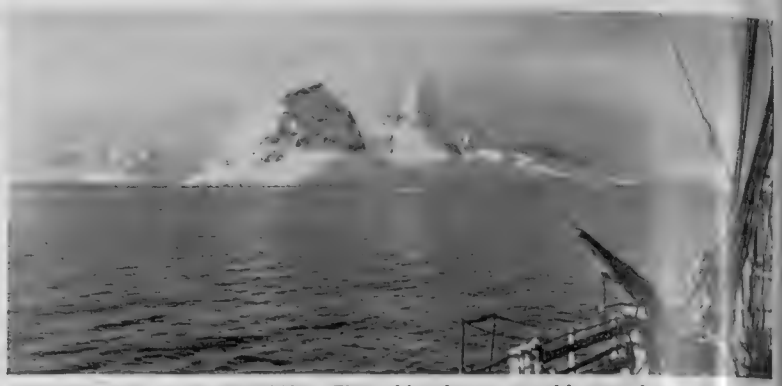
ON THE WAY TO THE POLE : The drawing depicts an incident during Captain Scott's expedition to the Pole in 1911-12. Ice and snow stretch seemingly to eternity. Over ice hillocks sledge and stores have to be manhandled. The Scott saga is one of the best known in British history. Certainly his organisation was not on a par with that of Amundsen, who beat him to the Pole, and the Englishman may have made errors of judgment in his planning. But he and his gallant band—Wilson, Bowers, Oates and Evans—"stuck it out to the end" and showed courage and endurance of an order which has rarely been equalled.

On left—

THE SHAPE OF THE UNKNOWN CONTINENT : One of Rear-Admiral Byrd's aeroplanes took this picture during an Antarctic flight. It is through this type of country that the proposed British Commonwealth Expedition will march on its projected trans-polar journey. The Antarctic Continent is utterly devoid of land animals and flowering plants. The silence is never broken by the sounds of life. Only the roar of the blizzard and the creak of ice are heard in this vast desert, of which the central point, 10,000 ft. high, is the South Pole. Polar explorers have performed many heroic feats. They have also contributed much by their researches into biology, physics and geology and to the development of map-making. Even to-day this scientific work has largely to be carried out by ground parties using dogs or motorised sledges.

A FAMOUS ANTARCTIC SHIP : The *Discovery* makes her way through the ice in 1930. She was carrying Mawson's British-Australian-New Zealand expedition. *Discovery* was adding to her fame, for earlier in the century she had taken Scott to the Antarctic. Since then she had been refitted.

THE "DISCOVERY II" : She also has a fine record and is in her element in polar seas such as these. Starting in the 1930's, she has made six voyages to the Antarctic, the last being in 1950. She engaged chiefly on oceanographical research.



THE FRINGE OF ANTARCTICA : The ship is approaching a frozen headland on one of the small islands of the Palmer Archipelago, off Graham Land. The main Antarctic continent was first sighted in 1820.

THE HAZARDS OF POLAR EXPLORATION : The pictures are of the Shackleton Trans-Antarctic Expedition. *On left*—Some of the party are on the ice-floe on which they camped after the disaster to their ship *Endurance*. They drifted for six months at an average rate of three or four miles a day. *On right*—Ice is being cleared for the *Endurance* to make a passage through the Weddell ice-pack. Eventually she was crushed by the ice and the explorers were marooned on the drifting floe.

THE UNKNOWN CONTINENT

(*Continued from page 335*)

This is known as the " Sector Principle." By it all land lying between a particular country and the North Pole is claimed by that country. This works well enough in most cases, since these lands—for example, the Canadian Arctic archipelago—are adjacent to mainland territories. Even in the Arctic, however, there were serious problems. A disputed territory was Greenland, claimed by Denmark, and in part by Norway. The case was submitted to The Hague Court. In the judgment rejecting the Norwegian claim a fundamental rule was established.

" A claim based not upon some particular title, such as a treaty of cession, but merely upon continued display of authority involves two elements which must be shown to exist: the intention and will to act as sovereign, and some actual exercise or display of such authority." This is best summed up in the international legal term " usucaption."

It is immediately clear that the mere discovery of a new land, or the formal act of taking possession, is a relatively minor factor, especially when a huge and largely untrodden hinterland exists.

In the Antarctic, if discovery alone were enough, then British claims would be very strong. The continent was first sighted by a British naval officer, and nearly half the Antarctic expeditions have been British, many of them sponsored by Crown authority.

The Norwegians, too, have a fine record of Antarctic work, and so, in a smaller degree, have the French. Parenthetically the small French segment of Adelie Land is the windiest place in the world, with a *mean* annual wind speed of 57 m.p.h.! The United States has never officially laid claim to any Antarctic territory, though, on one occasion, Byrd's aeroplanes dropped the flags of all the United Nations at the South Pole.

In the meanwhile, the new type of expeditions have continued to work in particular territories, and in the Falkland Islands Dependencies the British have maintained an almost continuous activity for nearly twenty years. In Graham Land especially, permanent bases have been established and regularly replenished with men and supplies. Post offices (a most useful piece of evidence of administration) have been established at seven bases, and special stamps have been issued.

The Post Office is an old device for this purpose. It was introduced to the Antarctic in the days of Scott. But the British post offices have competition. In recent years Chile and the Argentine, who hitherto had shown little interest in exploring the Antarctic, have put forward claims overlapping the Falkland Islands Dependencies. The Argentine bases her claims on geographical proximity and inheritance from Spain under the fifteenth-century Treaty of Tordesillas, which divided the undiscovered world between Spain and Portugal. Chile's claims are partly based upon the geologically unsound theory that the Andes reappear in the Antarctic.

CHARTING THE ANTARCTIC BY AIR: The greatest name in Polar flying is Admiral Richard E. Byrd, the American. Here one of his helicopters is seen returning to its ship after a flight during the Byrd Expedition of eight years ago. Byrd had already flown over the North Pole when he set out to fly over the South Pole in 1929. His expedition was extremely well-equipped and the costliest on record. With two ships, he established a base in the Bay of Whales, where Amundsen had camped. At the end of the year he was over the Pole in his aircraft. Since then the Admiral has made numerous Antarctic flying surveys.

ANTARCTIC RESEARCH IN THE NEW STYLE: A party from Byrd's 1947 Expedition are drawn over the frozen waste by tractor. They were working on the construction of a new air base. In recent years mechanical transport in the Antarctic has greatly improved.

On left—
A MECHANICAL BREAKDOWN: Technical skill cannot yet overcome the many perils of Antarctica. The tractor has been caught in a crevasse beneath the deceiving snow. The picture was taken during Admiral Byrd's 1939 Antarctic Expedition, his third on that continent.

FLAGS ON THE SOUTH POLE: Byrd looks from his aeroplane over the Pole in 1947. He was about to push out the carton of flags of U.N. members.

AN ANTARCTIC LAKE DISTRICT: In 1947 Byrd's aircraft reconnoitred an area in which they sighted a number of ice-free lakes. This is how their cameras recorded one of them. Americans have done much aerial survey of Antarctica. The U.S. has never made any claims to territory, but does not recognise claims by others.

THE LEADER-DESIGNATE OF THE NEW BRITISH COMMONWEALTH EXPEDITION: Dr. Vivian Fuchs studies the map in London. He plans a trans-polar crossing.

Both these countries have been busy establishing bases. At one a church, complete with a priest, has been the reply to Britain's post offices!

No signs of a settlement of the dispute are visible. Lately the Argentine established yet another base. It was at first reported to be on land outside British claims. But examination shows this, too, is an infringement of British "sovereignty." Fortunately, no serious incidents have taken place and all countries have now agreed not to send warships into Antarctic waters for the purpose of supporting their claims.

It is against this political background that much of the recent exploring activity and future plans must be viewed. One of the most successful expeditions since the war was a joint Norwegian-British-Swedish expedition to the Norwegian sector under Norwegian leadership.

With the International Geophysical Year imminent, further extensive plans are afoot. The Australians will be busy in their sector, and the Americans are proposing to establish by air a wintering base right on the South Pole. It is likely that the lowest temperatures ever recorded will be experienced at this base.

Perhaps the most exciting of the plans is that of Dr. Fuchs, who intends to carry out a complete crossing of the Antarctic continent from Vahsel Bay, in the Weddell Sea, to the Ross Sea, mapping and doing scientific work along hundreds of miles of unknown territory. This ambitious plan may bring to success Shackleton's dream of forty years ago of such a crossing. The difficulty with this type of expedition is the immense cost, liable to be something in the region of £250,000. But Dr. Fuchs, the Director of the Falkland Islands Survey, is a very experienced polar traveller.

These plans, which will also fit in with the researches of the Geophysical Year, call for Commonwealth co-operation on a large scale. For instance, it is proposed that a New Zealand party, under Sir Edmund Hilary, will lay depots of supplies for the main party crossing from the Weddell Sea. Only Government finance in this age can make it possible, and the Prime Minister told us last week that the British Government is prepared to grant £100,000 towards the Commonwealth trans-Antarctic project. Clearly, it will be up to industry, and even private individuals, to help too.

Finance is not, however, the only obstacle. The pack-ice of the Weddell Sea which defeated Shackleton has yet to be overcome. Aircraft will clearly be of great value in support of the sledge parties. Unfortunately, helicopters are of limited value, owing to the heights of the polar plateaus and the strength of the winds.

People may ask what is the purpose of polar exploration of this kind. No uranium has yet been found. The most abundant practical mineral is coal. The same question has been asked of every piece of pure research. Geography is a combination of sciences. Every science is an aspect of man's long ascent towards that transcendence which he believes is his destiny. Power and wealth are sometimes by-products. But human happiness through knowledge is the ultimate goal in the pursuit of this arduous journey.

A NEW PILOT SHIP

"Pathfinder"—the Trinity House Vessel—is seen in the Port of London Before Starting Her Duties

The *Pathfinder* will soon become familiar to those who voyage up the English Channel to London and beyond. She is the new Trinity House pilotage ship, one of those small vessels which come out to passenger and cargo boats, carrying the pilot to bring the big ship into port. They are accepted as part of a routine, but their presence is essential. Those who man the pilotage vessels and the pilots lead a lonely life and all the more deserve not to be forgotten.

Trinity House controls, among other areas, the pilotage for London. The *Pathfinder* is one of three ships which work from the Sunk Lightship off Harwich in the north, to Dungeness in the south. The usual organisation is for one ship to be working from the Sunk, a second from Dungeness and a third to be in reserve. No effort has been spared to make the new pilotage vessel as efficient and comfortable as possible. Built at Dartmouth, she has a speed of 11½ knots and is equipped with the latest types of radar unit, echo-sounder and radio telephone. Her crew and the pilots have comfortable quarters heated by a system of warm air. She also has improved food refrigeration. Pilotage is only one of the many undertakings for the safety of those at sea for which Trinity House is responsible.

THE CAPTAIN INSPECTS THE RADAR UNIT : Captain P. C. Clarke examines the up-to-date radar, with which his ship is fitted. She also has the latest type of echo sounder.

THE "PATHFINDER" IN LONDON DOCKS : The latest of the Trinity House pilotage vessels paid a short visit to London last week, before proceeding on her duties between Dungeness and Harwich. She carries the pilots who bring shipping into the Port of London and other harbours, and will thus become familiar to voyagers to England. She has a displacement of 677 tons and an overall length of 175 ft.

On right—

THE ENGINES OF THE PILOTAGE SHIP : In the *Pathfinder's* engine-room are the Chief Engineer, J. Guymer (on the right), and Second Engineer W. Hall. The ship has a complement of six officers and twelve ratings. She also has accommodation for the pilots whom she carries to bring vessels into port.

CLEANING SHIP : Three of the crew are at work keeping the *Pathfinder* spick and span. On the left is one of her boats, which can be swung from easily worked davits.

COMFORT FOR THE PILOTS : Every effort has been made to ensure that all on board the *Pathfinder* shall be as comfortable as possible. Here the Chief Steward, W. Banger, of Dover, is laying a table in the pilot's dining-room. The pilots live in double-berth cabins forward. The crew have similar cabins aft.

THE SIEGE OF THE RUMANIAN LEGATION

Armed Anti-Communist Intruders Captured the Legation Buildings in Berne and Remained in Possession for Forty-two Hours in an Attempt to Secure the Release of Political Prisoners in Rumania

THE SWISS POLICE ARRIVE OUTSIDE THE RUMANIAN LEGATION : Berne policemen outside the Legation after the building had been seized by armed men, who claimed to be members of an anti-Communist movement and said they would stay there until five prisoners in Rumania were released.

THE INTRUDERS SURRENDER : A crowd collects round the gateway to the Legation as three of the gunmen are taken to a police van. They finally gave themselves up after speaking to a priest. One intruder had been arrested earlier, and two are believed to have escaped from the Legation.

THE GUNMAN ON THE BALCONY : Wearing a mask and carrying an automatic weapon, one of the men who forced their way into the Rumanian Legation and evicted the occupants is seen on a balcony surveying the Swiss police and soldiers outside.

A remarkable drama was enacted at the Rumanian Legation in Berne last week, when six armed men fought their way into the Chancery building and drove out the occupants. In the course of the shooting which took place, the Legation's chauffeur, possibly a secret service officer, received wounds from which he died, after lying in the grounds for several hours. The Chargé d'Affaires, Mr. Stoffel, and his family, together with some members of the staff, either escaped into the street in their night-clothes or were rescued the following day. By that time five of the armed men were firmly established in the buildings, with a plentiful supply of weapons and ammunition. The sixth man had been captured by Swiss police while trying to leave the Legation with stolen documents. The acute embarrassment which the affair caused to the Swiss Government is witnessed by the fact that no fewer than three emergency meetings, the first at 7.30 a.m., were called to discuss the matter. Eventually permission was granted to Swiss police and soldiers, who had been called in, to enter the Legation grounds. But the siege had lasted well into a second day before the gunmen asked for a priest to visit them, and it was after talking to him that three of them surrendered. Two are believed to have escaped. The Rumanian Government took the opportunity to abuse the Swiss Government as well as the United States. The Rumanians must certainly be getting a little touchy about the behaviour of their nationals abroad, for almost coinciding with the Berne affair was the incident in Copenhagen, where a Rumanian employee at the Legation asked for political asylum and the Legation staff made a melodramatic attempt to kidnap him. There was also the defection of a Rumanian ballet dancer in Paris a few weeks ago. The only strange part about the Berne affair is that so little can be discovered about the men who took part in it. In any case, the Swiss Government refuses to extradite them.

THE MASKED MAN IN THE POLICE CAR : One of the intruders being taken away from the Legation after he and two companions had given themselves up. Apart from the fact that they claim to be anti-Communists, little is known about them.

EVACUATED FROM THE BELEAGUERED LEGATION : Although some of the staff of the Rumanian Legation escaped in the middle of the night at the time the Legation was taken over, others were not evacuated from the building until the following day.

THE DUKE OF EDINBURGH RECEIVES THE FREEDOM OF THE CITY OF GLASGOW: He is seen receiving from Lord Provost T. A. Kerr the wooden casket containing the burgess ticket embodying the act of sederunt constituting His Royal Highness a "burgess of the city and royal burgh of Glasgow." Looking on (in the foreground) during the ceremony in the banqueting hall of the City Chambers, are Sir William Kerr, the Town Clerk, and the Rev. Nevile Davidson, Minister of Glasgow Cathedral. The presentation was made last week during the Duke's one-day visit to Glasgow, when he also opened the Glasgow Agricultural Society's Scottish Dairy Show, and became a Craftsman of the 400-year-old Incorporation of Hammermen. Glasgow conferred its highest honour on the Duke as an expression of the abiding loyalty and devotion of the citizens of Glasgow to the Royal Family, and in testimony of their appreciation of the support which His Royal Highness has vouchsafed to the scientific and industrial institutions of the country; for his labours in connection with the provision of playing fields, and for the splendid example which he has afforded to the nation in the execution of the onerous duties attaching to his exalted station.

GLASGOW'S FREEDOM FOR THE DUKE

Prince Philip is Made a "Burgess of the City and Royal Burgh of Glasgow" during a Visit to Scotland

SIGNING THE BURGESS ROLL: For this event the Duke used his own pen. Standing on the table is the casket made of oak from the city's Cathedral roof, constructed in 1237 and removed during restoration work in 1911.

THE DUKE IS ENROLLED IN THE INCORPORATION OF HAMMERMEN AND GIVEN THE FREEDOM OF THE CRAFTS GUILDRY: The deacon-convener, Mr. James Stirrat, hands the Duke his certificates of enrolment as an honorary member of the Hammermen and a "Guild Brother of Craft Rank," at the Trades House. The Incorporation of Hammermen, the senior of the fourteen Incorporations of the House, is that most closely connected with ships and shipbuilding.

AT THE SCOTTISH DAIRY SHOW IN KELVIN HALL: The Duke is seen examining a stand exhibiting Commonwealth cheese products. He stopped to speak to many officials and exhibitors during his tour of the show.

PRINCESS MARGARET ARRIVES AT BRIDGETOWN, IN BARBADOS, DURING HER TOUR OF THE CARIBBEAN : The Royal barge from H.M.Y. *Britannia* is seen on its way to the small landing stage at Chamberlain Wharf, near Trafalgar Square, where Her Royal Highness was greeted by the Governor, Sir Robert Arundell. The Princess received a warm welcome from the townspeople, and especially from the thousands who crowded every vantage point along the channel from the sea to the landing stage. From Trafalgar Square, bought by the Government in 1805 in honour of Nelson's last battle, Princess Margaret went first to the Legislative Council chamber, and then to Government House. Later, she visited Hastings House, home of the Colonial Development and Welfare Organization in the West Indies. At Bridgetown's Oval she met the British Guiana and Barbados cricket teams.

PRINCESS MARGARET IN BARBADOS

A Further Stage in the Princess's Tour of the Caribbean

THE LAST MOMENTS AT BRIDGETOWN: The Princess boards the Royal barge in preparation for her journey to Antigua. It was estimated that the crowd which saw her go—about 30,000—was bigger than that which had welcomed her a few days earlier. One of Princess Margaret's journeys in Barbados was to the sugar plantations.

On left—
A BOUQUET FROM A BROWNIE: Fern Hanna makes her presentation during the children's rally at Garrison Savannah. Princess Margaret later toured the ground in a Land Rover.

On right—
ROYAL GRACE AND CHARM: Princess Margaret attends a State Banquet. She is wearing a silk organza ball dress, the front embroidered with small silk flowers, leaves and diamante.

A HISTORIC MANSION IN ONE OF BRITAIN'S FINEST AND LARGEST PRIVATE PARKS: A recent picture shows deer in the snow outside the Duke of Bedford's residence, Woburn Abbey, in Bedfordshire. This Easter the house and grounds are to be open for the first time to the public. Visitors will be able to see much of the magnificent collection of pictures and other works of art and walk through the park, which contains, among other animals, the largest herd of deer in captivity and the only herd of European bison.

PREPARATIONS AT WOBURN ABBEY

Next Easter the Public Will be Admitted for the First Time to Historic Woburn Abbey, the Home of the Duke of Bedford, who Plans to Meet Taxation by Exhibiting His Priceless Family Treasures

PREPARING TO SHOW HISTORIC TREASURES TO THE PUBLIC: *On left*—The Duke and Duchess of Bedford sort out stacks of furniture in the north corridor of Woburn Abbey. Some of the pieces have come from other of their houses. *On right*—The Duke stands in the library, one of the rooms he is reserving for personal use. The thirty-seven-year-old holder of the Bedford title succeeded his father two years ago. He has to meet vast death duties and his family history will help to pay them.

The burden of taxation upon the holders of historic British titles is causing an increasing number of them to throw open their magnificent homes to the public. By making history pay they can meet the demands of the Tax Commissioners.

The latest of the stately homes to come on the exhibition list is the Duke of Bedford's famous Woburn Abbey, in Bedfordshire. From next Easter the public will be able to see it. The present and thirteenth Duke was fruit-farming in South Africa when his father died two years ago. He succeeded to a title and vast estates. He found that the cost of running them and the requirements of taxation were enormous. Therefore he decided, as many of his fellow-peers had previously done, to turn his inheritance into a business. For some months now the Duke and Duchess have been working to ensure that the public shall see all that is best at Woburn.

The Russell family have been in possession there for over 400 years. After the Dissolution of the Monasteries, the Cistercian Abbey was granted to John, who was created 1st Earl of Bedford in 1550. Since then scarcely a generation has passed in Britain to which the family have not made a highly individual contribution. William, the 5th Earl, became Duke of Bedford in 1694 for his services to the Revolution. In 1832 a Russell introduced to Parliament the Reform Bill, and, incidentally, ended the monopoly rule of the oligarchy of English aristocratic families. In this century a Duchess of Bedford was a noted aviator, and another contemporary scion of the family is Bertrand Russell, the eminent philosopher and mathematician.

Needless to say, throughout hundreds of years a superb collection of pictures and works of art has been assembled inside the Abbey. They are to be displayed in the State Apartments of the house which was built in the middle of the eighteenth century. Its features include the Grotto, the Chinese Dairy, Camelia House and extensive pleasure gardens. The whole estate has a perimeter of 22 miles. In its grounds are the largest collection of deer in captivity, the only herds of European bison and of Chartley cattle, and many other rare animals and birds.

THE PRIVATE DINING-ROOM: It will not be open to the public. On the walls is a collection of Canalettos, some of which are seen here. The value of each is about £5,000.

AN ETCHING BY QUEEN VICTORIA: The public will see this etching by the young Victoria which she gave to the Duchess of Bedford in 1841.

THE RUSSELL HERITAGE : The Duke and Duchess are giving all their time preparing to show the Woburn treasures to the public. Here they are in the Chinese Room. The wallpaper was hand-painted in China in the eighteenth century. The screen is hand-sewn.

E LONG CORRIDOR WAITS TO BE CLEARED : Here stacks of furniture and paintings must be sorted. The Duke and Duchess are working with only a small staff.

A GALLERY WHICH HOLDS MEMORIES OF THE WHIG OLIGARCHY : The Duke looks at some of the sculptures which were collected by his ancestors when they were members of the great aristocracy which ruled Britain in the age before the First Reform Bill. Since the Reformation the Russells have contributed much to British history in a wide variety of fields, from government to philosophy and science. Woburn Abbey was originally a medieval foundation of Cistercian monks. The Russells obtained the estate in 1547. The house of to-day was built by Henry Flitcroft in 1746.

On left—

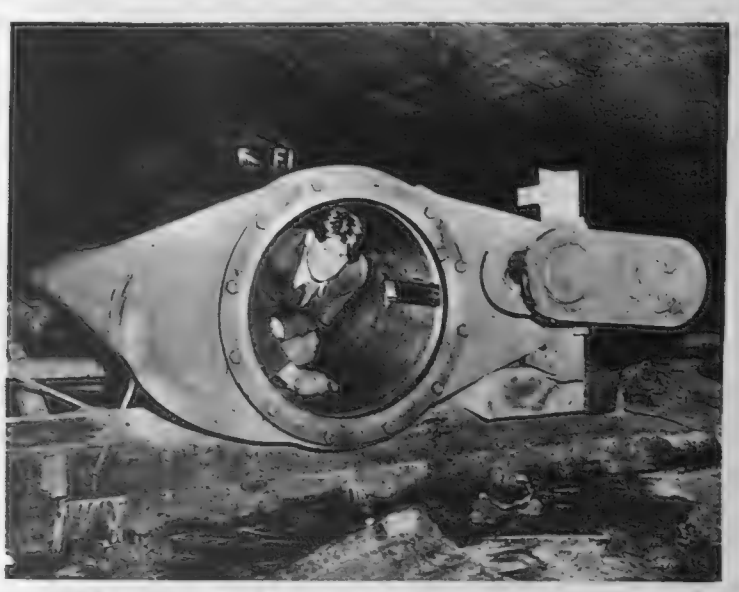
AN ANCESTRAL PORTRAIT : This large canvas of a sixteenth-century Countess of Bedford, in one of the rooms at Woburn, is among the many Russell family portraits which may be shown to the public.

CTURES HAVE TO BE SORTED : The wealth of works of art in the Bedford inheritance is staggering. Scores of paintings in the family collection have to be examined and the selection for public exhibition decided. Many are from the hands of great Masters.

A ROYAL BED : It is in the room occupied by Charles I and Queen Victoria when they visited Woburn during their reigns. The Duke and Duchess are examining one of the brocade curtains of the bed, while two of their staff hang another.

AT WORK IN THE SHIPYARDS

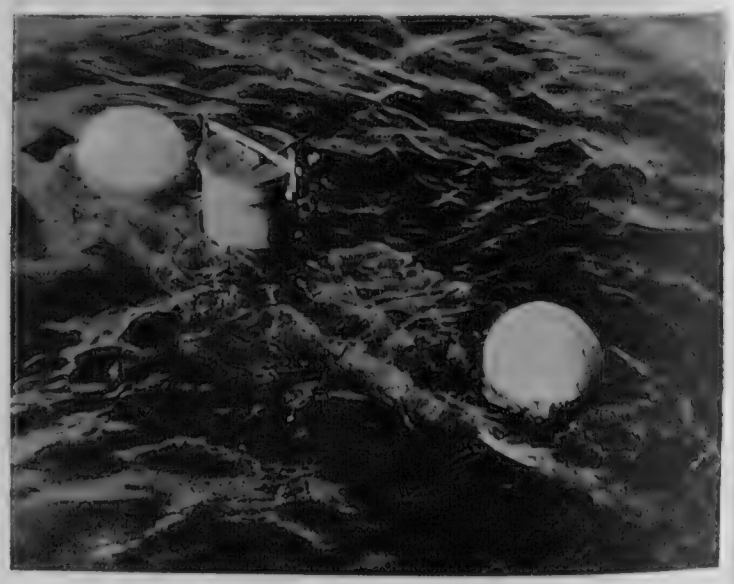
SOUTHAMPTON, CLYDESIDE AND LUEBECK ARE THE CENTRES AT WHICH NEW WORK IS CARRIED OUT ON VESSELS OF TO-DAY AND TO-MORROW



SMOOTHER CROSSINGS FOR THE "QUEEN ELIZABETH": One of the four Denny-Brown Stabilisers which are being fitted in the Cunard liner during her annual overhaul. The workman inside the fin gives some idea of its immensity. *On right*—Some of the stabilising equipment being lifted into the hull of the *Queen Elizabeth*. The stabilisers, which are gyroscopically controlled, will reduce the roll of the liner in heavy seas. Two fins are fitted in each side of the vessel.

FIXING THE 34-TON RUDDER OF THE NEW 22,500-TON CANADIAN PACIFIC LINER "EMPRESS OF BRITAIN": Work goes ahead on the great new liner (on left) which is now taking shape at Fairfield's shipyard at Govan, Glasgow. The liner, whose promenade deck can be seen in the picture *on left*, is costing more than £5,500,000. She is the first of two sister-ships to be ordered by C.P.R. and is due to enter the Canadian Pacific's Britain to Canada service in the spring of next year. The Queen has arranged to launch the *Empress of Britain* on June 22. With a streamlined bridge, one mast and single funnel, the ship will bring a "new look" to the Canadian service. The usual cargo-handling machinery will be concealed, and flush-fitting hatch-covers will increase the space for passengers on her decks, which are constructed in echelon fashion. Denny-Brown Stabilisers will help to maintain steadiness.

A GERMAN PRODUCES A NEW SAFETY DEVICE FOR SUBMARINES: *On left*—Herr Karl Krammkau, the inventor of the device, explains its mechanism at Luebeck with the aid of a 15-ft. model. *On right*—The model, with two air-filled balloons, emerges from the depths at a test demonstration. The two balloons, which are made of nylon, are concealed in two special hatchways. These open automatically if the submarine gets into trouble while under water and cannot surface under her own power. The balloons are automatically filled with compressed air and carry the submarine to the surface. German naval experts are sceptical about the invention. They cannot visualise its practical application.



AFTER THE SIEGE WAS OVER

Pictures of the Rumanian Legation in Berne After the Anti-Communist Intruders who Seized the Building had Surrendered to the Swiss Authorities

UNTIDY GUESTS: The open safe in the study of the Rumanian Chargé d'Affaires. *On right*—A parting message on a blackboard standing on the mantelpiece in the Rumanian Legation's drawing-room. The inscription reads "Do not believe we have finished yet."

THE STATE IN WHICH THE INTRUDERS ARE ALLEGED TO HAVE LEFT THE LEGATION: Clothes and documents strewn on the floor of one of the bedrooms. *On left*—A desk, a table and an armchair were used as a barricade against the windows of the building. There was some delay before Press photographers were allowed into the Rumanian Legation after the surrender of the intruders.

ROUND-TABLE TALKS DURING THE SIEGE? Two views of the Legation's drawing-room. It alleged that this is the state in which the intruders left it. The chairs round the table contrast strangely with the confusion caused by the barricading of the windows. Perhaps this is where the intruders spoke to a priest shortly before their surrender. Two of the gunmen are believed to have escaped; the four in the hands of the Swiss authorities will not be extradited to Rumania.

THE SLEEK LINES OF THE NEW LUXURY LINER "SOUTHERN CROSS": The 20,000-ton liner, belonging to the Shaw Savill line, is seen at the Belfast shipyard of Harland and Wolff, her builders, as she is prepared for her maiden voyage, which will start on March 29. The *Southern Cross* heralds a new fashion in passenger liners, and her most remarkable new feature is the single funnel, which is placed well to the rear. The propelling machinery, comprising geared turbines, is also installed aft, and not amidships as is usually the custom. The vessel will carry no cargo, and as the hull will be free of cargo holds, the layout can include a continuous series of large public rooms and cabin accommodation on five decks. The liner is fitted with Denny Brown stabilisers to ensure comfort in rough weather. The maiden voyage will take the liner round the world, and among her ports of call will be the West Indies, Panama, the South Sea Islands, Australia and South Africa. The liner carries 1,600 passengers and is already fully booked for 1955.

The Home News in Pictures

THE "SOUTHERN CROSS"

A UNIQUE AND ELEGANT PASSENGER LINER PREPARES FOR HER MAIDEN VOYAGE, AND OTHER EVENTS AT HOME

THE NEW BUILDINGS OF NUFFIELD COLLEGE AT OXFORD: The pictures *above* and *on the right* show that architecturally this new foundation will fit in with the rest of Collegiate Oxford. Lord Nuffield had already given munificent benefactions to the University when he decided to establish the college in 1937. Up till now its work has been carried on in a row of private houses in North Oxford. Nuffield is a research college, whose members are mainly engaged in social studies. It provides opportunities not only to the academically qualified for research, but also to leading non-academic figures to contribute their wide practical knowledge of public affairs to the development of the social sciences. Among politicians who have carried out such research under the Nuffield Foundation is Mr. Herbert Morrison.

THE BRITISH KANGCHENJUNGA EXPEDITION SETS OUT: Sir John Hunt, the Everest leader, went aboard the *Circassia* at Liverpool to wish them good luck. From left, in front, are N. D. Hardie, J. Brown, C. Evans (leader), Sir John Hunt, J. A. Jackson. At the back are J. N. Mather, G. C. Band, Dr. J. Clegg, T. D. McKinnon and A. Streather. Kangchenjunga, in the Himalayas, is the highest unclimbed mountain in the world and is out-topped only by Everest and K.2.

CAVEMEN IN READING: Two University students, Tearlach MacLean (left) and Arthur Fleetwood, are seen in a cave near Reading, dressed and living as prehistoric cavemen. This self-imposed discomfort was to enable the students to reply to a motion that man should return to his original state. For three days the two men lived in the cave, which is, in fact, an artificial grotto built during the last century, and their staple food was pigeon, which they caught barehanded and roasted over a wood fire. The fire should have been lit by rubbing two sticks together, but this method failed, and a concession was made to modern times and matches were produced. The experiment was a success, however, as the students returned to civilisation armed with abundant evidence that man should not return to cave life, in the forms of scratches, colds and hunger

A SHOP COLLAPSES IN LANCASHIRE : Eleven people were injured when a chemist's shop collapsed in Ormskirk Street, in St. Helens, Lancashire. Two girls checking stock on the first floor were thrown into the road below, and buried under piles of rubble and debris. But they suffered only cuts and bruises. Of the eleven injured, one—a workman—was detained in hospital.

A JETTY COLLAPSES IN SCOTLAND : This picture shows the 100-yard jetty in the lower harbour at Perth, on the east coast of Scotland, after its supports had broken down. The jetty had been showing signs of strain and had recently been fenced off. The collapse is reported not to have affected the shipping which comes to the harbour at the mouth of the River Tay in the Firth of Tay.

On left—

AN AIRCRAFT RESEARCH CENTRE AT BEDFORD : **This is the new National Aeronautical Establishment, where Britain's largest wind tunnel is being built.** The main feature in this picture is the vertical spinning tunnel. Model aircraft are released into this and are subjected to an upward draught. Some of the models will be radio-controlled and their behaviour in the tunnel will help aerodynamicists investigate methods of recovery from spin. The large wind tunnel, which is still under construction, will occupy a 20-acre site. The working section will be about 8 ft. square, and models with a wing span of up to 6 ft. will be tested. The speed range will go from zero to Mach 2.7, which is the equivalent of about 2,000 miles per hour at sea level. It has been hinted that even greater speeds—from ten to twenty times the speed of sound—are being visualised as fields for research by the Ministry of Supply.

A NEW LOOK IS PLANNED FOR ALDWYCH : **The proposed nine-storey extension which is to be built on the site of the now disused Gaiety Theatre for the English Electric Company.** The building will join Marconi House, which can be seen on the left of the picture. Aldwych is in the foreground and the Strand runs behind the two buildings. This design, which was adjudged the best from the nine submitted, is by Mr. Gordon T. Tait, of Messrs. Sir John Burnet, Tait and Partners. The building is planned so that it will ultimately take its place in a large square, which is part of the rebuilding scheme of the London County Council. Designing this new building was difficult. The square envisaged by the L.C.C. will not be created for some time, and the extension has to blend with both its present and future surroundings.

BRITISH RAILWAYS BLAST THEIR WAY TO MODERNISATION : A small arched brick bridge which spanned the Liverpool Street to Chelmsford line just beyond Ingatestone is demolished by explosives. A new bridge with a flat deck of pre-stressed concrete beams is to be built. This bridge will be able to carry the overhead electrical equipment needed for the extension of electrification from Shenfield to Chelmsford. The line is already electric from Liverpool Street to Shenfield, and a further extension is to be made eastwards on the line from Shenfield to Victoria Station, Southend.

The Sphere of Travel

IN SOUTHERN AND CENTRAL EUROPE

The Second of Two Articles Dealing with Visits to the Continent; Holidaymaking in Europe's Southern Countries

By GORDON COOPER

TRAVEL agents with whom I have spoken report, without exception, that the demand for holidays abroad is beating all records this year. Undoubtedly the lack of sunshine last summer in Britain and our present rather arduous winter have made many people feel that they *must* go in search of places where they can get really warm—the warmer the better. But should you be planning to visit any of the more popular Continental resorts during the High Season (July and August), then I think you would be wise to make the necessary hotel reservation forthwith. And try and arrange to travel mid-week when the cross-Channel steamers and the trains are less crowded than at the week-ends.

It is best, too, to enquire from your travel agent as to whether early bookings for seats on planes and trains is advisable. This is, indeed, sometimes essential if you wish to make your journeys on fixed dates.

France.—The word "fashionable" is nowadays often used to describe a resort which is merely popular but hardly smart and distinguished. The French seaside resorts of Deauville and Cannes rank, however, as two of the world's great fashion centres. In the summer

THE SPANISH FRONTIER TOWN WITH A SNUG LITTLE HARBOUR: A view of Port-Bou, one of the first stations in Spain on the railway route from Perpignan to Barcelona. Fifty years ago travellers had to be warned that, at the custom house, they "should defer their visit to the buffet till after the inspection of their baggage."

Deauville is a blaze of flowers. It offers everything: horse-racing, polo, air meetings, first-class tennis, riding, and a continuous programme of fetes and galas. It shares with Trouville an excellent yachting harbour, and its golf course is celebrated. During August, particularly, it is thronged with notabilities. It can be reached by direct air service from England, by motor-coach from Havre in connection with the British Railways steamer, or by fast trains on the direct line from Paris by French Railways.

Although Cannes is seen at its best around Easter, when it stages a round of outstanding festivities, including an International Film Festival (April 26 to May 10), it breathes luxury throughout the summer. It attracts princes and millionaires, celebrities and prodigals, you and I; there seems to be room for everyone. Yet, how pleasant it is to holiday in this gilded vacuum, staring at celebrities and forming part of the incredible picture. Not least of the attractions of Cannes are its shops, which are only excelled in allurement by those in Paris. There is, of course, every kind of entertainment, such as tennis tournaments, polo matches, cabarets, concerts, and so on. There is the Casino, where large sums change hands, but where you can try your luck for a few shillings. Then, this fashionable resort is also an excellent centre for excursions along the coast and into the attractive hinterland.

Spain.—Of the larger seaside resorts in Spain, Santander is my favourite. Its bay presents a lovely picture and forms a splendid setting for the yachting regattas which are held there during the summer. There are also facilities for many kinds of outdoor sport: sea fishing, boating, horse-racing, bull-fights, tennis tournaments, and there are a couple of good golf courses. The fine sandy beaches provide wonderful bathing. Santander is also an excellent excursion centre, the outstanding excursion being to Santillana and the near-by Altamira caves. Santillana is one of the most remarkable places in Europe, a medieval town of remarkable historical and artistic importance which is now preserved as a national monument. You can lodge there in the Parador de Gil Blas, one of the nicest hotels in which I have stayed in Spain. The Altamira caves are famous for their prehistoric paintings of wild animals, dating back for at least 15,000 years.

In Santander (Sardinero) I found the Hotel Bahia satisfactory. It will be possible, this summer, to travel there by ship direct from Torbay, thus avoiding the rather lengthy land journey through France, and then on from San Sebastian. Further particulars of the weekly sailings can be obtained from the Torbay Ocean Terminal Agency.

Portugal.—It is a pity that travel communications between Britain and Portugal are rather inconvenient. You can fly there and back, of course, but the fare is not particularly cheap. The shipping services are unreliable, the long railway journey from a Channel port tedious. The motorist is, in fact, in the best position. You could, however, consider travelling out by sea to Vigo, in north-west Spain, whence it is only a short rail trip into northern Portugal. This is an interesting part of the country which is rarely visited by tourists, yet the scenery is delightful and there are some interesting towns, especially Viana do Castelo, which is particularly rich in medieval domestic architecture and is famed for the magnificent regional costumes worn by its women.

A little to the south is Ofir, a pleasant seaside resort with an excellent beach. Then, during the period of the grape harvest, the Valley of the Douro offers a festive gaiety second to none in Europe during the vintage season. On all sides of the valley there is a continuous singing, strumming of guitars and beating of drums. Altogether, it is as joyous a scene as you could hope to find for a holiday.

Switzerland.—Of the various Swiss cities none offers a more entertaining holiday centre than Lausanne. Among the bigger resorts, it is certainly the place I would choose myself. It is beautifully situated, holds the sunshine record with about 2,000 hours a year, and has facilities for every kind of sport and entertainment. There is no better excursion base in this part of Switzerland, for there you are in the Swiss lakeside centre of the Lake of Geneva. Evian and Thonon (in France) lie just across the water; with ease, Geneva and Montreux can be reached by boat or train; Berne is within comfortable range of a day's excursion; and then there are the lesser-known places to be visited in the neighbourhood: the charming town of Gruyères (where the cheeses come from), standing high on its rocky crag, with a single street lined with ancient houses, the whole contained within its ramparts; the Chateau of Blonay (above Vevey), which has been in the hands of the de Blonay family for nearly 800 years; and Puidoux-Chexbres, a village set amidst the vineyards, and which hangs like a balcony over the lake. In fact, I think you will be delighted with Lausanne, which also boasts some of the best restaurants in Switzerland, while there is a wide range of hotel accommodation.

Austria.—During a recent journey to Austria I toured the Bregenzer Wald, in Vorarlberg, the most easily reached province from England, yet one which has not attracted the visitor as it should, although its countryside is truly lovely. In this particular district, a land of sloping hills and well-wooded mountains, there are some delightful villages in which to stay: Bezau, Au (where the cows enjoy eating edelweiss), Schoppernau and Schröcken being the larger resorts, while smaller villages which appeal to me are Bödele, Mellau and Schwarzenberg—and, for the escapist, Damuels. In all these places there are clean, very clean, hotels and inns where you can be sure of a warm welcome and will be well looked after; prices are most reasonable. The regional costumes worn by the women are as beautiful as any in Europe. There are unlimited opportunities for pleasant rambles.

Italy.—No tourist department in Europe excels the Italian in the art of producing attractive travel literature. I have in mind, especially, three recently issued brochures which present, most enticingly, "Localities off the Beaten Track," and which cover, respectively, the northern, central and southern regions of the country. The places they name are certainly in no travel agent's list, but this will be an added attraction to some discriminating people. I also realize the serious gaps in my own travel experiences; but there are some old friends: Torre Pellice, for instance, in the province of Turin.

This little town of medieval origin stands in the valley inhabited by the Vaudoises, better known as the Waldenses, for here still live those Protestant communities who were so cruelly persecuted in the seventeenth century and thus inspired Milton's famous sonnet. They still retain their faith, and live in simple fashion. The scenery is superb, while to me, at least, every yard of this classic ground seems permeated with the *religio loci*. At Bobbio Pellice, an even simpler village, I saw Cromwell's Wall—a dam built with funds sent out by the Great Protector. There is adequate hotel and inn accommodation in both places. Torre Pellice is only thirty-three miles from Turin, and there is a linking bus service.

Twenty-five miles from Reggio Calabria, high up in the mountains and reached by a wonderfully scenic road, is Gambarie, a small resort situated amidst the pine and beech forests of the Aspromonte. It is a lovely spot, and from it you can get a marvellous panorama of eastern Sicily. This is another "off the beaten track" choice which I can strongly recommend.

Much more luxurious travel in Italy is provided by tours arranged by Lammins Tours and Motorways, both firms of good repute; and they don't rush you around.

Yugoslavia.—For those who prefer to avoid the almost too popular Dalmatian coast, I can recommend Bohinj, which lies a few miles from the better-known Bled. Its lake is one of the loveliest in Slovenia, with the mountains of the Julian Alps enclosing it on three sides. Around this lake there is an almost complete absence of buildings, for the district is now a national park and further building is prohibited. There are, however, several hotels, my recommendations being the Zlatorog (second category) and the beautifully situated Dom Pod Voglom (third category). Of course, Bohinj is no place for anyone who wishes to see a lot of Yugoslavia. Once you are there, it must be visited for its own and not for places to be reached from it. Incidentally, there is excellent fishing. You get there by taking train on a branch line from Jesenice to Bohinjska Bistrica, then by bus or taxi for a matter of four to six miles.

It might interest some readers to know that Fairways and Swinford are arranging an architectural tour of Macedonia. In Yugoslavian Macedonia there is an exciting range of Serbo-Byzantine architecture, especially in that part of the territory which lies between Skopje and Lake Ohrid.

Greece.—Although there is quite a boom in conducted tours to this historic land, there are not many facilities available for the individual traveller who prefers reasonable standards of comfort. Apart from Athens, my own choice would be the spa of Loutraki, north of, and not far from, Corinth, where there is good hotel accommodation, while at the same time it is a good centre for various interesting excursions to the classical sites.

Turkey.—This year there are various organized tours which include Istanbul in their itineraries. For those, however, who would like to stay for a while in Turkey, I would recommend Büyükada (90 mins. by boat from Istanbul), the largest of the Princes (Prinkipo) Islands, where the Hotel Akaysa can be recommended. I think the adventurous traveller would also certainly be fascinated by the coastal countryside around Izmir, where there can be seen the fascinating ruins of many ancient Ionian cities. The Turkish Tourist Bureau in Istanbul will answer travel queries, while Oceanways Ltd. is a firm specializing in journeys to this part of the Mediterranean.

USEFUL ADDRESSES

Fairways and Swinford, 14, *Hanover Street, London, W.1*
Italian State Tourist Dept., 201, *Regent Street, W.1*
Lammins Tours, 67, *Blenheim Terrace, N.W.8*
Motorways Ltd., 85, *Knightsbridge, S.W.1*
Oceanways Ltd., 23, *Haymarket, S.W.1*
Torbay Ocean Terminal Agency, 45, *Carlton Road, Torquay.*

AROUND MONTREUX

The Attractive Town on Lake Geneva is an Excellent Centre for Exploring the Valleys and Mountains which Surround it

Written and Illustrated by J. Allan Cash

Montreux, at the eastern end of Lake Geneva (or Leman), is one of the best centres in Switzerland for seeing the country. Wooded hills, lofty mountains, high passes, deep valleys, the vineyards of the Rhône Valley, and ancient towns in the agricultural area to the north, not to speak of the lake with its bathing beaches, colourful little harbours and magnificent views—all are within easy reach. One can even go into France, across the lake.

Montreux itself is an attractive town, with shady walks along the lake shore and, of course, with its incomparable Castle of Chillon. Round the head of the lake and a few miles up the Rhône Valley stands another magnificent castle at Aigle, set amidst vineyards on the hillsides. For the visitor there are numerous trips by boat on the lake, even as far as Geneva. One of the loveliest and quietest little harbours I have ever come upon is at Tour de la Peilz, only two or three miles away.

At Aigle there is an interesting mountain road, now being greatly improved, through the Col des Mosses to the ancient stronghold of Gruyères, noted for its cheese. There are various routes off the Rhône Valley, up into the mountains on either side, reached in a short time from Montreux. A very pleasant one is from Monthey, up the Val d'Illiez to Champéry. This is a beautiful wooded valley, containing several quaint villages, with magnificent views of the Dents du Midi, a serrated crest of peaks nearly 11,000 ft. high. Another road on this side of the Rhône Valley climbs from Martigny far up into the Gorge de Triese, crossing the highest bridge in Europe on the way up. Looking over the edge of the bridge, one can see the bottom of the gorge 900 ft. below.

Yet another road—and a favourite excursion from Montreux—runs up from Martigny to the Great St. Bernard Pass. At least part of this road is the route followed by Napoleon, and long before that by Hannibal, when he brought elephants over the Alps. At the top stands the famous Hospice of the St. Bernard monks with their even more famous dogs. To-day there is little call for them to go to the aid of travellers lost in the snow, but a number of the fine animals are still kept there.

A ROAD OFF THE RHÔNE VALLEY: The little village of Val d'Illiez, in the well-wooded valley of the same name, which lies on the road from Monthey to Champéry. The valley is one of the many attractive parts in this area which can be conveniently reached from Montreux.

THE FAMOUS CASTLE BY THE LAKE: The Castle of Chillon seen from the shore of Lake Geneva at Montreux. It was the ancient stronghold of the Counts of Savoy.

AMID THE VINEYARDS OF THE RHÔNE VALLEY: The old castle at Aigle stands in the centre of the district's vineyards in the valley of the River Rhône, not far from the head of Lake Geneva at its east end.

THE HOME OF A FAMOUS CHEESE: The town of Gruyères, which stands on a low hill at the foot of the Dent du Broc. The small fortified town is best known for the famous cheese to which it has given its name.

On right—AN ATTRACTIVE CENTRE: A view of Montreux crowding down to the shores of Lake Geneva. Well-endowed with good hotels, the town makes a good centre for exploring the surrounding country.

The World of Books

CHARLEMAGNE TO MACARTHUR

New Assessments of Legendary Figures; The Calvary of Sister Benedicta; Alberto Moravia's New Novel, "A Ghost at Noon"

FROM Charlemagne to Douglas MacArthur is quite a leap across the centuries, but strangely enough it does not constitute a very great leap in imagination. This week we are asked to consider both these legendary figures, immensely strong characters who each in his own way has made a deep impact upon the ways of men.

Harold Lamb, who has already proved his ability in conjuring up Europe's and Asia's early history, with notable lives of Theodora, Suleiman, and Genghis Khan, now embarks upon a full-length biography of CHARLEMAGNE (Robert Hale. 16s.), that Roman Emperor and Frankish King who, in a reign of forty years, that was packed with action, conquered the Lombard kingdom in Italy, passed over the Pyrenees, and drove the Moors back behind the Ebro. It was he also who brought the Bavarians within his kingdom, as he did the Avars lying still farther to the East, and made the Danes and other peoples dwelling on his borderland respect his arms.

Charlemagne was a lawgiver and a builder, and, above all, a churchman. Harold Lamb reveals him in all the splendour of his rich achievement. It is hard to say if we have here any very real contribution to our historical knowledge, but we certainly have a notable clarification. Exactly how did Charlemagne come to shape a new world in the West? We shall probably never know, but his greatness was unquestioned in his own day, and we begin in these pages to glimpse why this was so.

Douglas MacArthur will long remain a controversial figure. The record of his achievements in the military sense is truly remarkable, and no one for a moment would wish to detract from it. The record of his political interventions is no less astonishing, but even in this respect he has his staunch defenders. One of them, beyond doubt, is Frazier Hunt, a journalist who has covered most wars and revolutions in more than half a century of reporting, and clearly holds MacArthur in strong affection.

In THE UNTOLD STORY OF DOUGLAS MACARTHUR (Robert Hale. 25s.) he is both fair and factual when it comes to recounting actual warfare, but when he enters the political jungle Mr. Hunt is ready to do battle, even to the extent of providing a chapter-heading on Korea entitled "A War he was not permitted to win." The author is at great pains to show us the hostility of General George Marshall and of Dean Acheson towards the hero of the Pacific. In fact, Mr. Hunt is here, there and everywhere, as he dashes to the rescue with a degree of support that is possibly hardly necessary for an old soldier who has shown well enough across the years that he can take very good care of himself.

"Give my love to the sisters at St. Magdalena, I am travelling Eastwards." On August 7, 1942, Edith Stein spoke that quiet message from a train pulling out of Schifferstadt Station, in German-occupied Holland, en route to Camp Auschwitz. Two days later, on the Vigil of St. Lawrence, Edith Stein and her sister Rosa walked into the gas chambers, leaving behind one poignant message scribbled hastily on a scrap of paper. It read simply enough, "Greetings from my journey to Poland, Sister Benedicta." And so, under a great weight of sorrow, not of her own making but the world's, this noble Jewess of keen intellect and resolute mind passed to a terrible death. One that she had no doubt clearly foreseen from the moment that the Nazis began their pogroms in Germany, forcing her to flee to Holland and be received into the Carmelite community at Echt. It was there that Edith Stein continued her studies in mystical theology, working on until 1942, when she was arrested by the Gestapo.

In THE SCHOLAR AND THE CROSS (Longmans. 18s.) Hilda C. Graef presents a study of Edith Stein, both in regard to the main outlines of her life and, more particularly, in regard to her philosophy. In her last years Sister Benedicta, as she was known, was deeply preoccupied with the teachings of St. John of the Cross, the living, active, actual known truth which she called the Science of the Cross. Whenever Edith Stein leaves the philosophical and enters the personal sphere in her writings it becomes apparent that she knew full well the nature of her destiny.

GEOFFREY HOUSEHOLD AND FRIEND: The author of *Fellow Passenger*, who "knows how to cram exciting, dramatic action into a very few pages." Household lives in London with his Hungarian wife, three children and two cats. His first novel, *The Third Hour*, was published in 1937.

Arnold Haskell's DIAGHILEFF (Gollancz. 18s.) is a reissue of a book published originally in 1934. Since then ballet has reached a wider public, in part because of the brilliant work of Sadler's Wells which, besides continuing Diaghileff's work, has also translated him into our English vernacular. It is of great interest to compare this book, written in 1934, with the changed conditions of 1955. If this volume had been written to-day it is to be doubted if we should have needed so elaborate an apologia for Diaghileff's private behaviour. In view of the now wider ballet public, many of the quotations from the French (which are plentiful) would have been rendered in English. These things apart, it is good to see this book again, with its fascinating and sympathetic account of Diaghileff's beginnings, his apprenticeship to art and his emergence in the field of ballet.

John Stewart Collis has produced at once a work of information and a work of art in THE MOVING WATERS (Rupert Hart Davis. 15s.). He describes various aspects of water, from its ascension out of the sea, to its return there. He ranges widely in this remarkable story, showing water in the service of man in terms of transport and power, but more essentially water as a natural element.

It is hard to know whether to be profoundly irritated or profoundly moved by Alberto Moravia's latest novel; whether to regard it as a psychological masterpiece or whether to be bored stiff by all this introspection and soul-searching; but it is almost safe to say that no reader will come to the end of A GHOST AT NOON (Secker and Warburg. 12s. 6d.) without pondering that he may have been in touch with greatness. This is an extraordinary novel. The theme is conjugal love. Molteni, the young Italian script-writer, emerges as a hopelessly weak and unassertive creature, unsure of himself at all times once he begins to be unsure of the love of his wife, Emilia. The growing apart of these two is most skilfully portrayed, and the endless probings of the sick-at-heart Molteni, who seeks to find why he is despised and rejected, while they may be wearisome, are at least intriguing. The scene is set at first in Rome's film colony, and when it shifts to sunlit Capri the theme continues to what seems must be the inevitable conclusion.

It is at this moment that Alberto Moravia takes matters in hand. This shall not drift, he says, to a drab and commonplace ending, although all the tracks lead that way. He diverts the traffic into supernatural paths, but the "ghost at noon," in which we are asked to believe, is, surprisingly, more credible than all the realities that have gone before and I for one, confronted by the final triumph and tragedy of this Roman marriage, can only stand aside in admiration and say that here is a novelist cast in no common mould.

A holiday pilgrimage to the battlefields of 1914–18 is not exactly an inviting central theme for a novel published in this year of grace, 1955, and surely we can turn our backs with ease upon the post-war continental junketings of the boys of the old battalion who survived the holocaust of High Wood and Passchendaele. But the truth is that a quarter of a century after James Lansdale Hodson wrote "Grey Dawn–Red Night," that memorable novel of the First World War, he has tackled the subject again, most movingly and who would dare to say with an excess of emotion? This RETURN TO THE WOOD (Gollancz. 12s. 6d.) is a nostalgic glance back across the years; it is the testament of William Hargreaves, a Lancashire solicitor, torn by the great dilemma of his time, whether, in any circumstances, war can be just and right. It is not the major conclusions, the deep philosophising, that give this novel its quality; far from it. That quality lies in a sense of kinship with all mankind, not least in the extremities of battle, when Hamp, the soldier who is not so good and not so bad, the indifferent fellow of weak will and moderate intellect, deserts amid the turmoil of the guns and heads for Calais, there to be picked up by the Redcaps. How Hamp is tried, how Hargreaves defends him with a zeal that causes many a raised eyebrow, and how Hamp goes to his death, just after reveille, drunk, drugged and bound hand and foot, a pitiful and unlovable mortal, but watched over by the padre, by Hargreaves, and another officer with a compassion transcending everything, could not be better told.

Salterton is a small town in Canada, but not so small that it has not got a newspaper and large enough to have a university and a fairly well-defined society life, with the warring Vambraces and Bridgetowers appearing rather in the capacity of the Montagues and the Capulets. A host of folk strut across this small-town stage. The story would be a weak one if it were not for its many likeable and true-to-life characters, for the plot is flimsy, even by musical comedy standards.

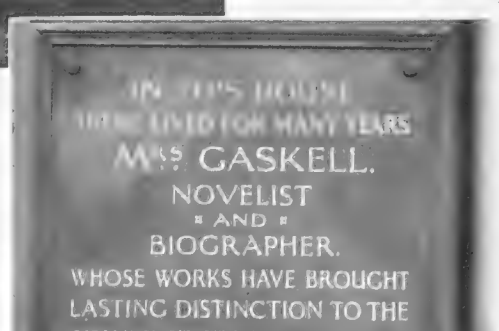
The trouble begins with a most adroit piece of mischief-making perpetrated by an unknown hand in the pages of the local newspaper—to wit, the engagement of a Vambrace to a Bridgetower. The ructions that follow in this Canadian Verona are not difficult to imagine, and in LEAVEN OF MALICE (Chatto and Windus. 12s. 6d.) Robertson Davies builds up the edifice of libel and slander with obviously keen enjoyment.

Louise Bickford, a widow with three daughters, who passed her like a bucket from hand to hand, who always said the wrong things, felt, at the age of fifty-seven, singularly unloved and useless. Always she was afraid of being a burden to her daughters, and she was for ever worrying about what other people were thinking. In THE WINDS OF HEAVEN (Michael Joseph. 12s. 6d.) Monica Dickens has drawn a most moving picture of this widow struggling against the uncertainty and the insecurity of old age, and everyone will surely find enjoyment in the dénouement when Louise meets the corpulent and gentlemanly salesman of beds who is a novelist in his spare time, and a most appealing human figure in his well-organised kind of way. *The Winds of Heaven* is a most satisfying novel; it is full of shrewd observation and perhaps the best thing that Monica Dickens has so far done.

Roy Forster's novel, THE FLUTE OF ASOKA (Eyre and Spottiswoode. 12s. 6d.), is a really grand thriller, a war-time tale that begins grippingly with the capture of a German S.S. general by a British lieutenant in the final days before the fall of Dunkirk. At that fateful encounter John Strange learns about India's Army of Freedom, and so the scene shifts from the beaches of La Panne and a surrounded Army, to the jungles of the Irrawaddy and the beginnings of an even more ruthless war, and a first-rate adventure, replete with more than a dash of romantic interest.

Another adventure story for your recommended list is Geoffrey Household's FELLOW PASSENGER (Michael Joseph. 12s. 6d.). Mr. Household knows how to cram exciting dramatic action into a very few pages. The scene changes swiftly from the Tower of London to Ecuador, and to an atomic energy plant somewhere in Britain, but sheer high spirits cannot be kept at bay and Mr. Household is good for many a laugh just when the drama is mounting to a crescendo.

Richard Edmonds



COMMEMORATING MRS. GASKELL: This plaque (*on right*) has been placed by Manchester Corporation on No. 84, Plymouth Grove, Manchester, to record the residence there of "Mrs. Gaskell, Novelist and Biographer, whose works have brought lasting distinction to the city which she made her home." It was also in this same house that Charlotte Brontë, while on a visit to her future biographer, began work on *Jane Eyre*. Mrs. Gaskell's first novel, *Mary Barton*, which dealt with working-class conditions in Manchester, appeared in 1848.

In **OUT OF BARBARISM** (Museum Press. 15s.), *C. T. Stoneham, whose associations with Kenya go back to* 1915, *describes some of the problems confronting that troubled country.*

MARCH OR DIE (Museum Press. 16s.), *by Howard Swiggett, is an illustrated and detailed story of the French Foreign Legion, dealing with the exploits of the Legion in many parts of the world.*

SEDUCTION OF THE INNOCENT (Museum Press. 21s.) *is an account by Fredric Wertham, M.D., of the gradual and relentless perversion of American children through the medium of "horror comic" magazines.*

RACING REFLECTIONS (Hutchinson. 18s.) *is a collection of John Hislop's racing articles from* The Observer. *The drawings are by John Skeaping.*

In **GREAT RUGGER PLAYERS** (Stanley Paul. 12s. 6d.), *J. B. G. Thomas recalls some of the outstanding personalities of the present century who have adorned the Rugby Union game. There are many illustrations.*

Comments on racing cars form a prominent part in the profusely illustrated second **ANNUAL AUTOMOBILE REVIEW.** *The distributors of the book in this country are G. T. Foulis; the price is* 35s.

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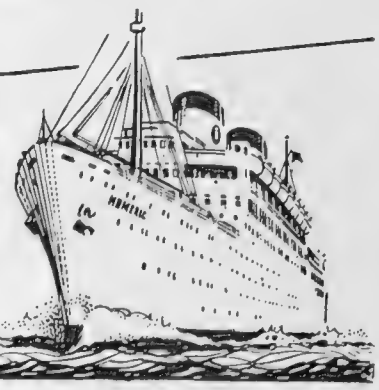

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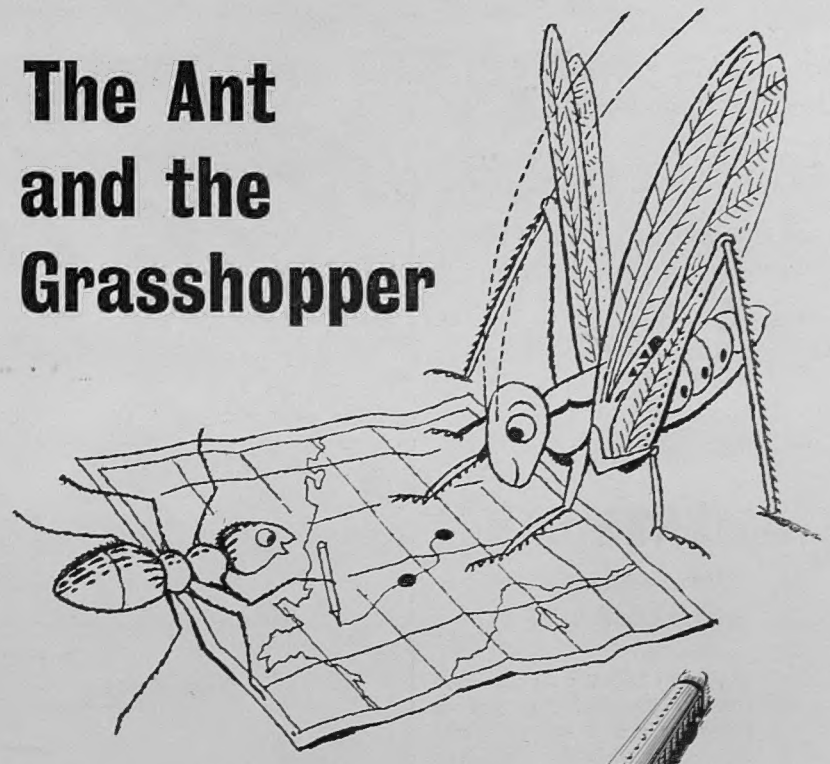

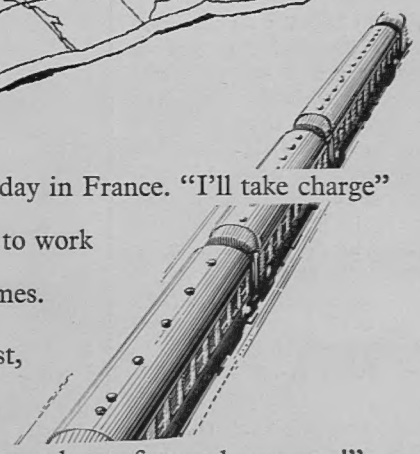

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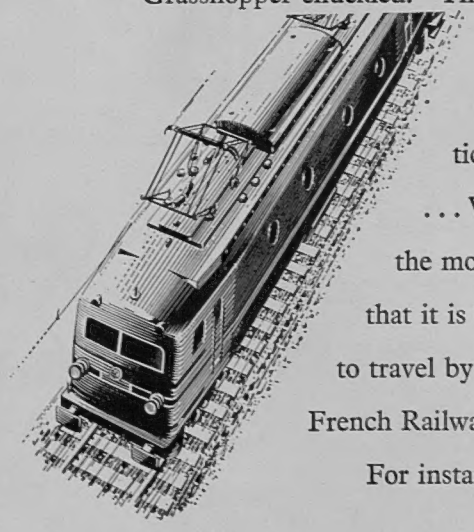

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Although road travel to-day is certainly more comfortable, "The Half Way House" is still as welcome, though often as not it will be found, not on the highway, but down a side road remote from traffic noises.

In coaching days, when a time-table had to be adhered to, certain coaching inns, because of their location, became more famous than others, but with individual motoring we break our journey—not necessarily half-way, but at any hotel which is well adapted to the needs of modern travel.

It is exciting prospecting for these hospitable "milestones" where, irrespective of weather conditions, we will find welcome in the ever open door—and those intending touring Britain this year, if they are enquiring enough, need never experience a poor meal or a bad night's accommodation.

To illustrate my point I will name some halting places which I have never heard faulted. I am often asked about an hotel to stop at on the busy A6 road in the Carlisle neighbourhood, when travelling to or from Scotland. The answer is, without any shadow of doubt, Shap Wells Hotel, which lies three-quarters of a mile off the A6, mid-way between Kendal and Penrith. Admittedly it is 29½ miles south of Carlisle, but what is that in time or distance when it means peaceful and picturesque surroundings, superlative comfort, a perfectly cooked meal, and a welcome from the resident manager and his wife, Mr. and Mrs. H. Castle.

A forty-bedroom hotel, with views of woodland, bracken and heather, we owe our grateful thanks to a North-country industrialist who saved it from decay, and spent some £40,000 in bringing it to its present note of comfort, elegance and luxury.

Travelling into Scotland you will, in the holiday season, soon discover that in your search for a comfortable night's rest you will have a competitor in the luxury motor coach tours. In the quite indispensable A.A. handbook (and whatever anyone may say, I have a profound admiration for the way the Automobile Association solves all my motoring problems for £2 2s. per annum) they insert the letters N.C.P. against all hotels not accepting coach parties.

Now, among the Scottish N.C.P. hotels I intend to stay at this year, subject to accommodation being available, is Dunkeld House Hotel, the entrance gates to which are on the main highway between Perth and Inverness.

Through the 40-acre policies of the estate, one comes to this charming hotel (once the home of the Duchess of Atholl), and whatever time of the year your car wheels may stop by the front door, a great sense of comfort and luxury will be quickly experienced. A family concern is the running of Dunkeld House Hotel, with Mr. and Mrs. G. H. Wilson, their son and daughter, fully able to cope with any staff problem of the moment. Equipped for the vagaries of the weather (central heating, of course, in winter), one has a tremendous sense of restfulness after a tiring day at the wheel.

Where else can I suggest incomparable inns such as those I have already mentioned? Let 's turn our minds to the A1—the Great North Road to Scotland. If the cars outside are any criterion of value, The Cromwell, at Stevenage, must surely rank as one of the best of the stopping places on this busy highway. Full marks to Lieut.-Colonel W. Elwys Jones who, as resident manager, has a kindly welcome for all-comers, and an experienced eye for all that goes on in a busy roadside hotel, before and behind the scenes.

Do not despair if The Cromwell cannot accommodate you, however, for only a mile or two off the Great North Road is The Sun, at Hitchin, which might be said to be a blood relation of The Cromwell, in that Mr. and Mrs. Eric Elworthy are the active directors in each. A long and proud history has The Sun. It is featured in many a book on England's old Inns. Suffice to say here that it has now entered on a new lease of life in which directorate and staff are dedicated to serve the travelling public of to-day—the individual motorist.

My Half Way House on the eastern side to Scotland lies well off the A1, and how glad I am to avoid it at this point. It is Petwood Hotel, Woodhall Spa, and never was a detour so worth while.

Petwood is surely one of the most sumptuous of country-house hotels in Britain. Of the thirty-five bedrooms, seventeen have private bathrooms, the whole hotel is lavishly and comfortably furnished, and it has always been a matter of regret to me that I have only used Petwood, so far, as an hospitable milestone.

Now let us turn our thoughts westwards. Presently, roads leading to Devon and Cornwall will be thronged, especially at week-ends. There are many "hospitable milestones" that will, thanks to their consistent comfort and efficiency, gather new custom through the introduction of personal recommendation. I have in mind hotels I have mentioned before such as Deer Park Hotel, near Honiton; Gipsy Hill Hotel, Pinhoe, near Exeter, and last year I made a new find—Endsleigh, six miles from Tavistock, a quarter of a mile off the road that leads on to Launceston. Well does the Devonshire home of the Duke of Bedford, now open as a luxury guest house, fit into the pattern of my theme. Such utter tranquillity after a day's journeying is hard to believe. Many a haven have I left with regret, but nowhere more than Endsleigh. Under the kindly eye and quiet efficiency of Mrs. Young, who is in charge, there will be much to enjoy be your stay short or long—and there will be the memories.

You can travel without travail this year if you will but follow in my car tracks.

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offers those visiting Ireland the utmost in bedroom comfort; 150 rooms with radios, central heating, iced water, and 24-hour service. Many private bathrooms and suites. The Gresham Grill, Cocktail Lounge and Ballroom are the social hub of Ireland's capital. For Reservations write S. O'Sullivan. Tel.: 46881.

FALMOUTH. FALMOUTH HOTEL
A fine anchorage for an early holiday with its sunny sea aspect, spring flowers, lifts (ground floor bedroom if need be), and high standards of catering and comfort. Write to R. J. S. Fields, outlining your requirements. Tel.: 761.

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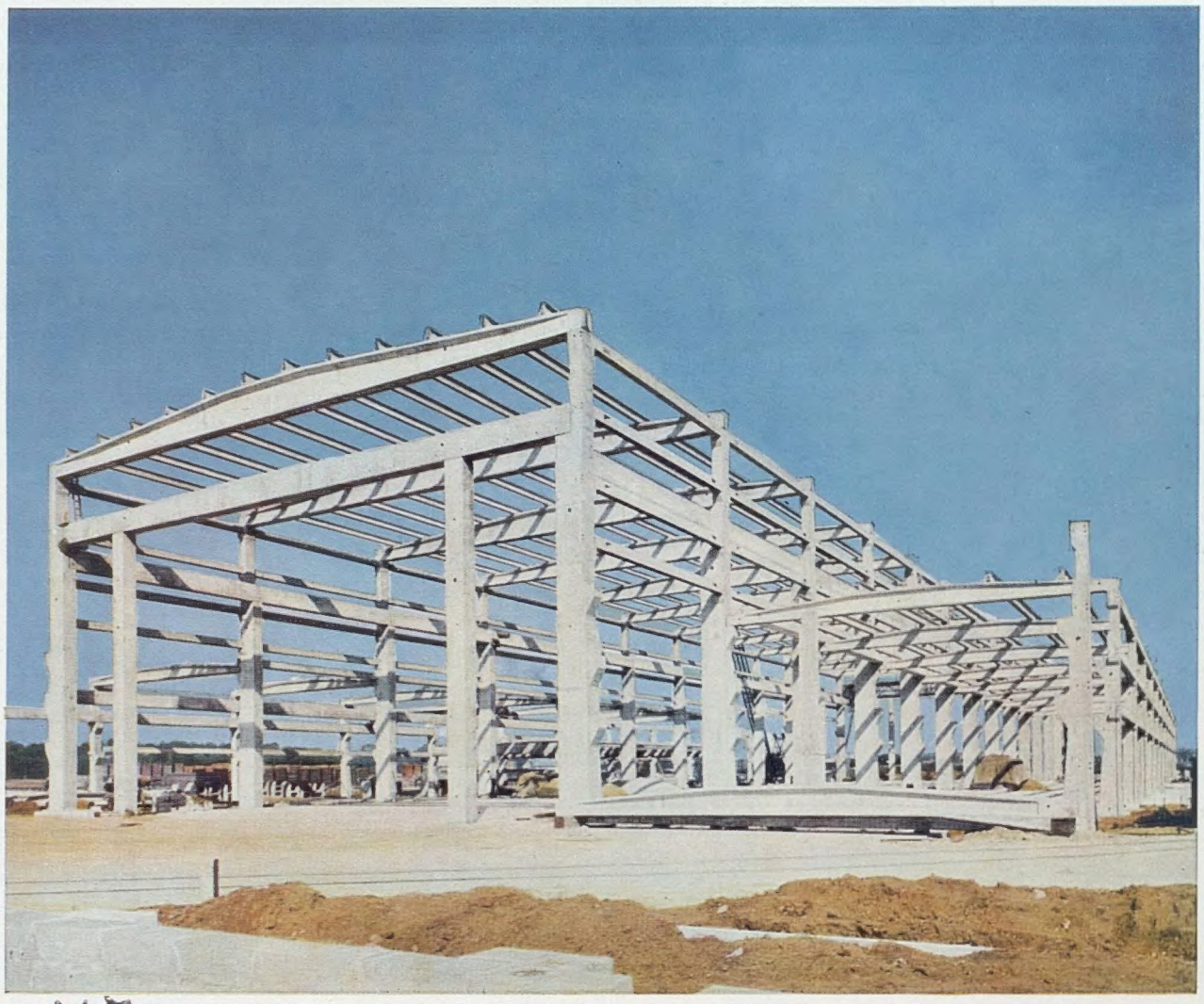

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